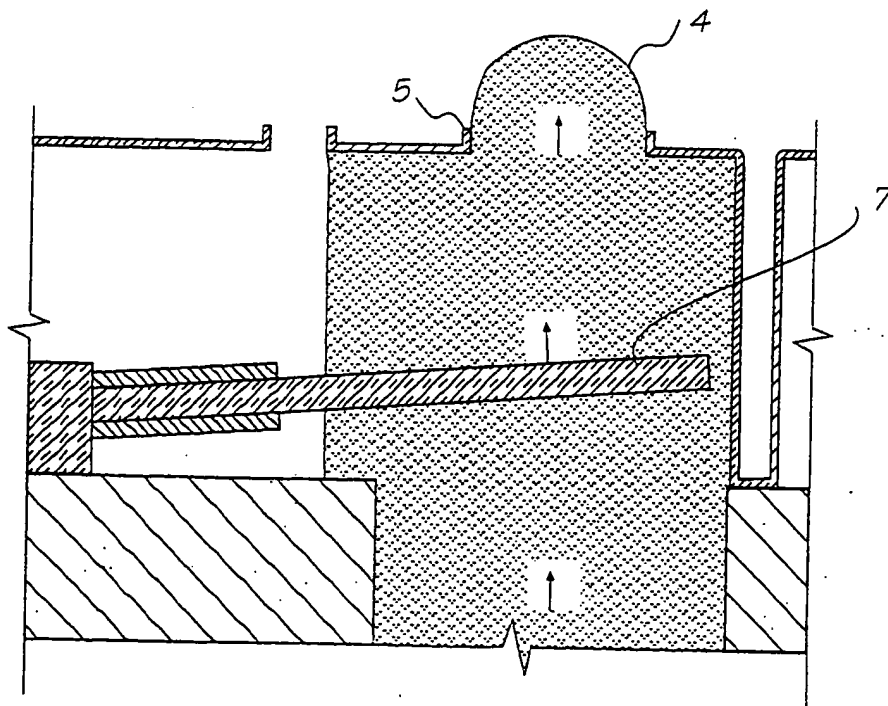
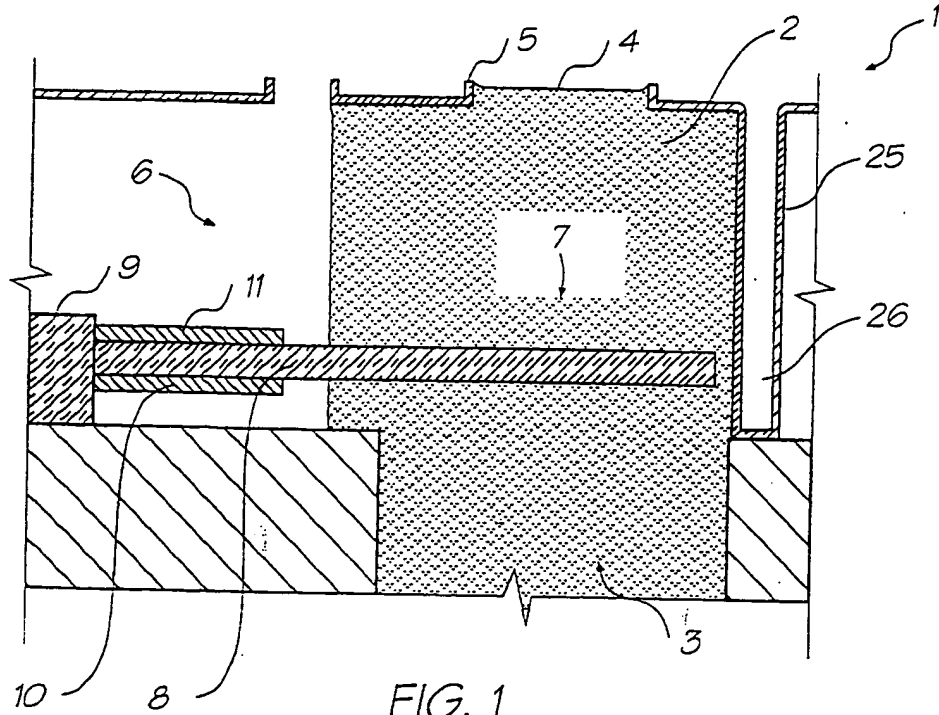


1/81



0933971.041601

2/81

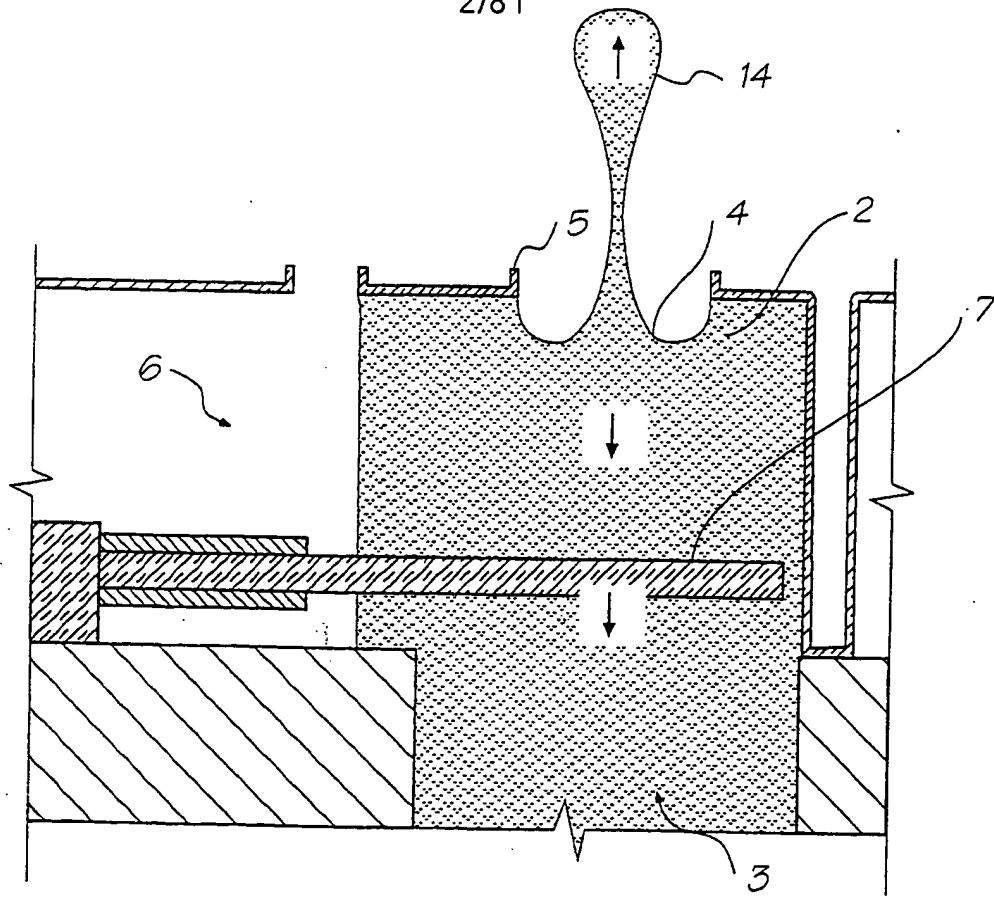


FIG. 3

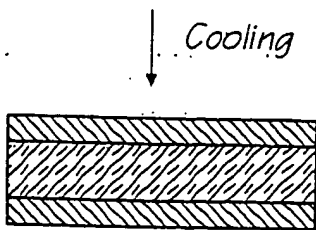
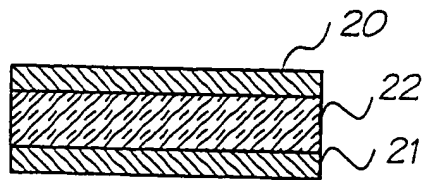


FIG. 4

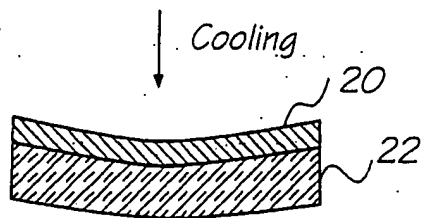
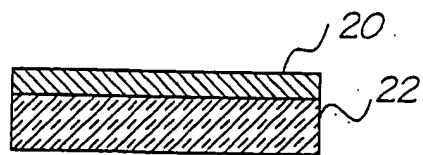


FIG. 5

093571 041604
for 255650

3/81

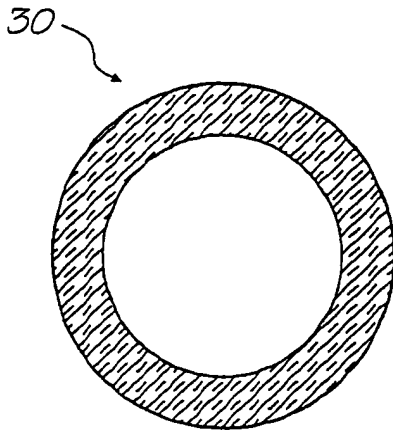


FIG. 6

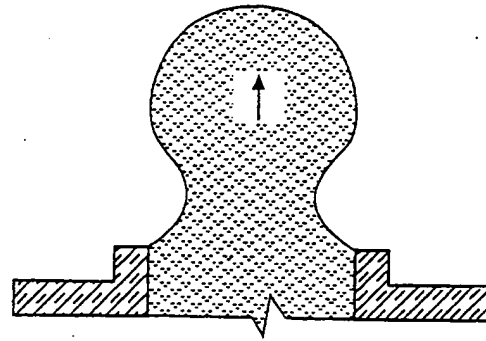


FIG. 7

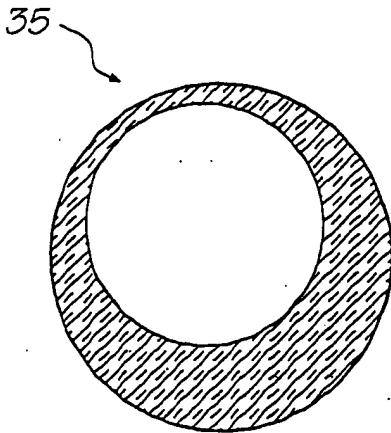


FIG. 8

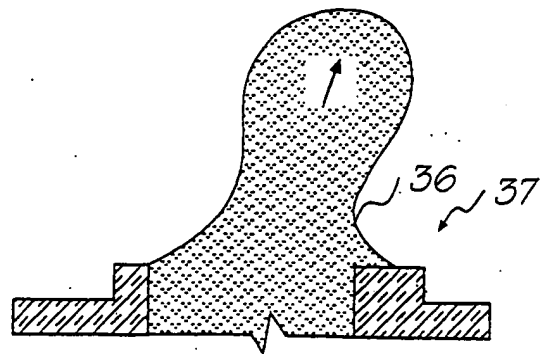


FIG. 9

09635711-041601

4/81

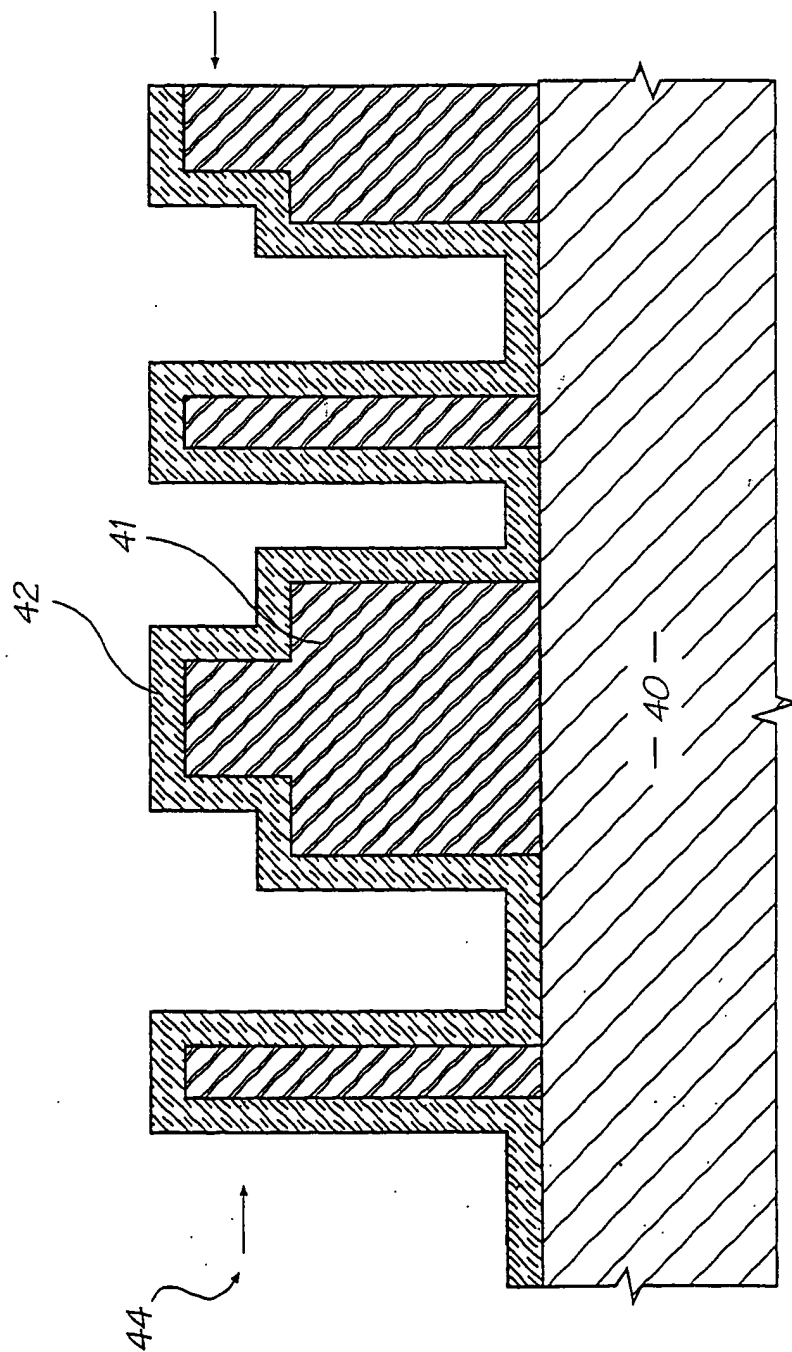


FIG. 10

5/81

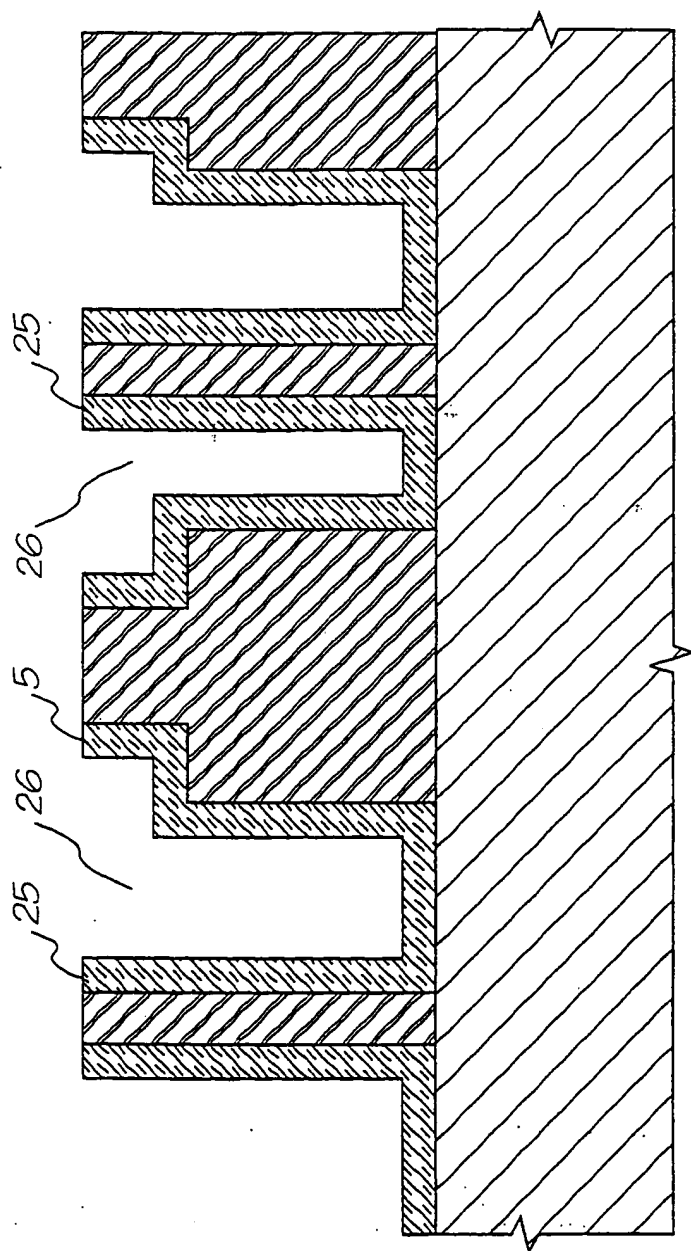


FIG. 11

FIG. 11

6/81

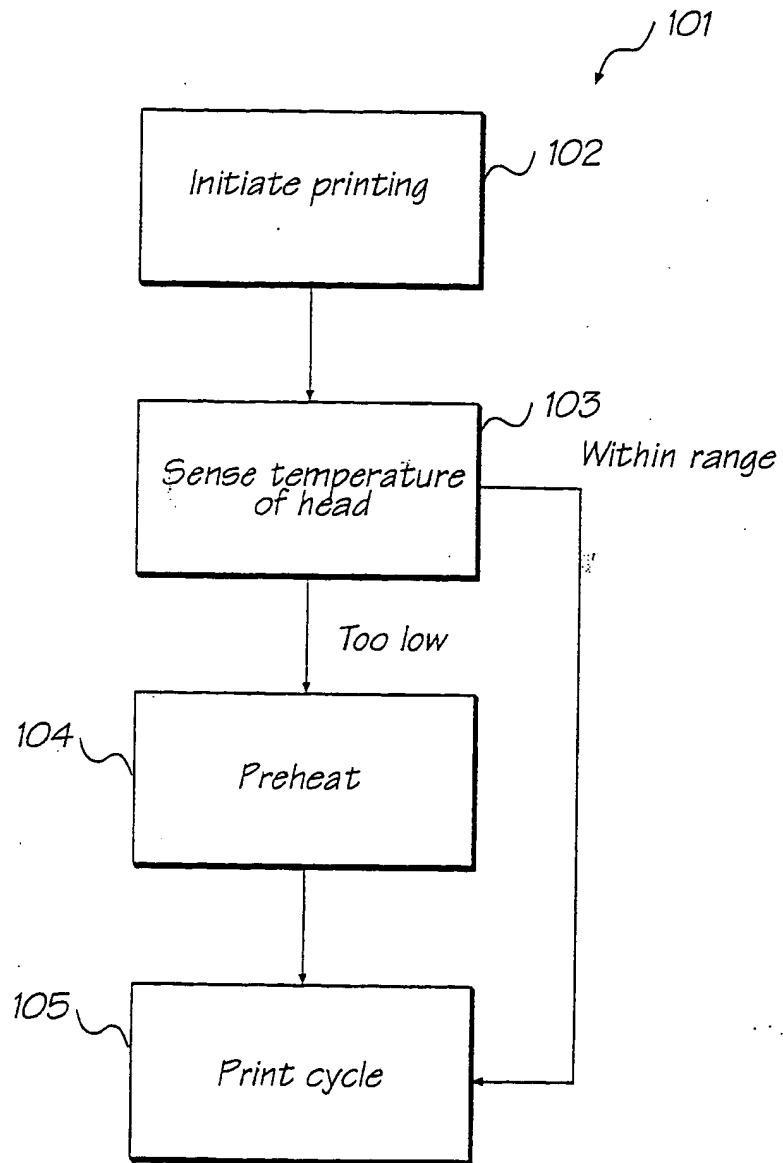


FIG. 12

FIG. 13

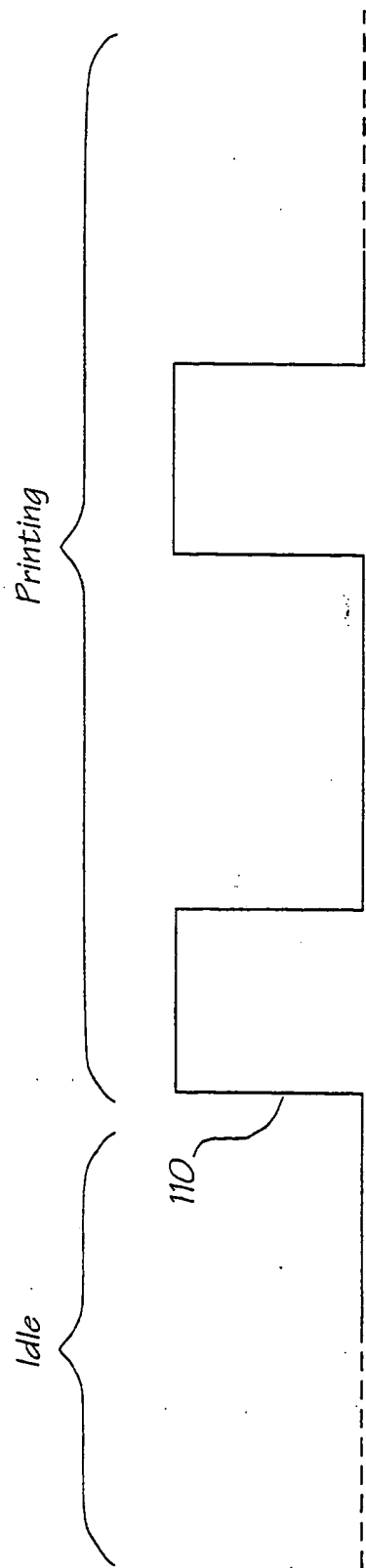


FIG. 13

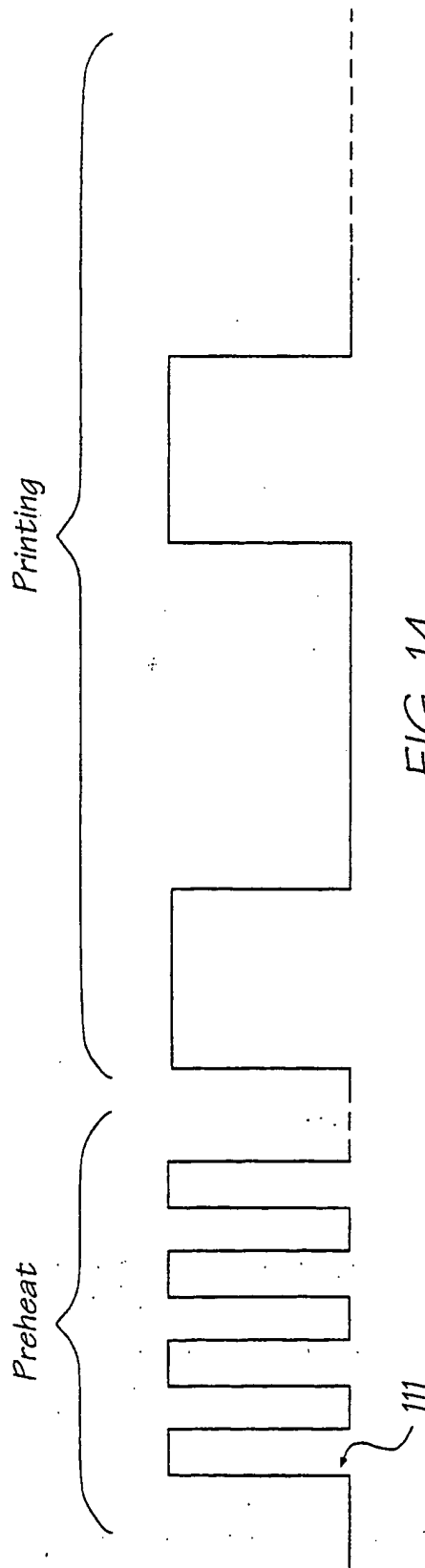


FIG. 14

8/81

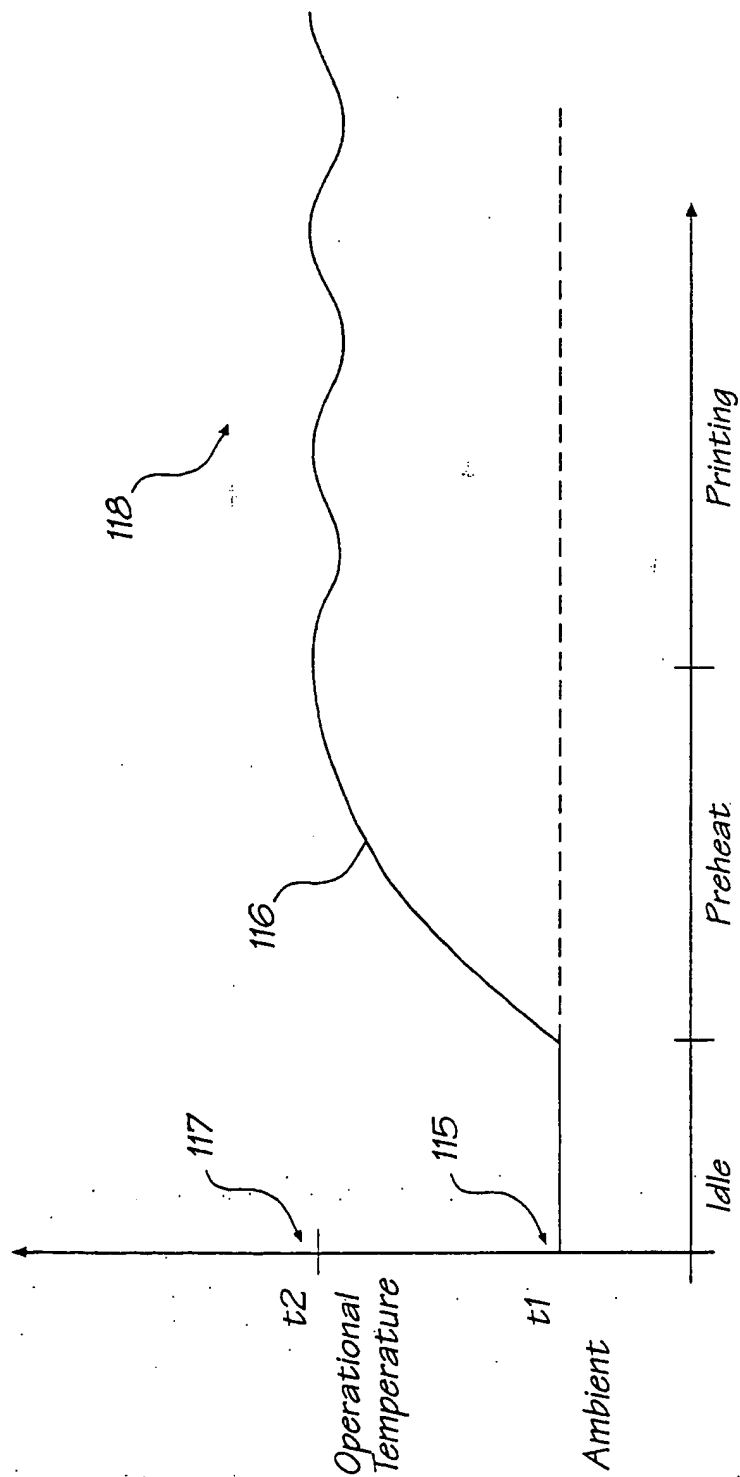


FIG. 15

FIG. 15

9/81

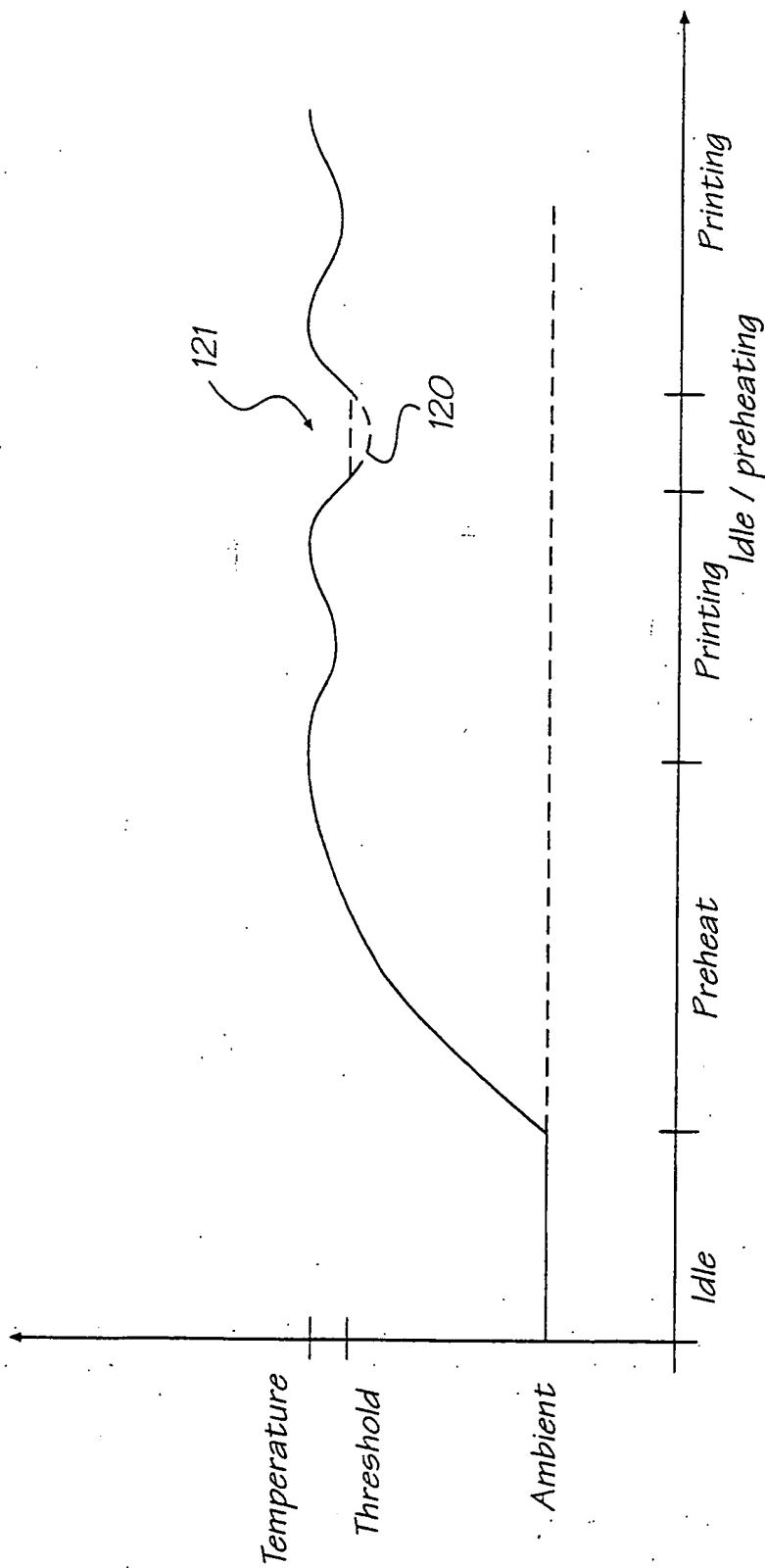


FIG. 16

FIG. 16

10/81

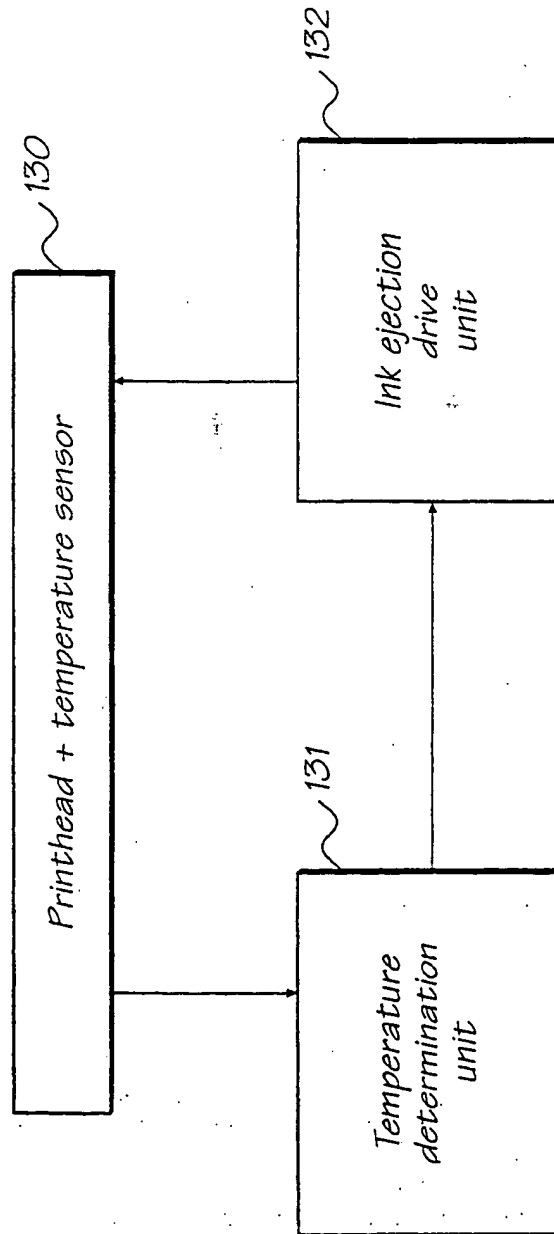


FIG. 17

FIG. 17

11/81

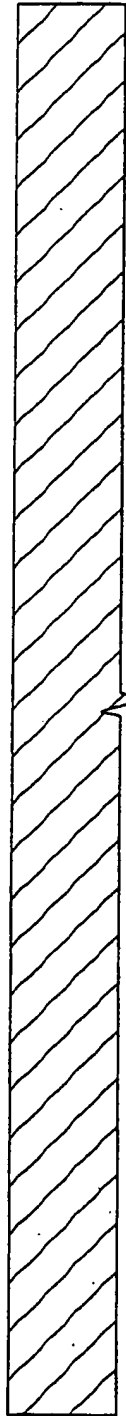
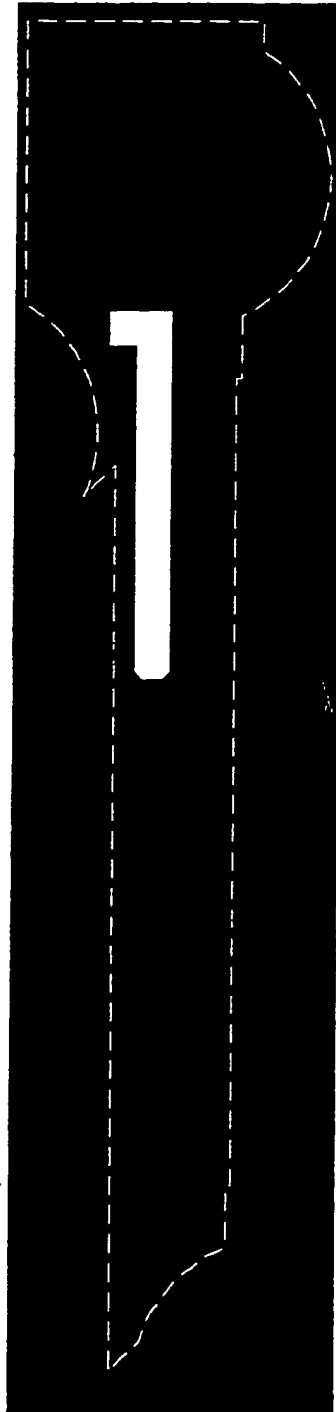


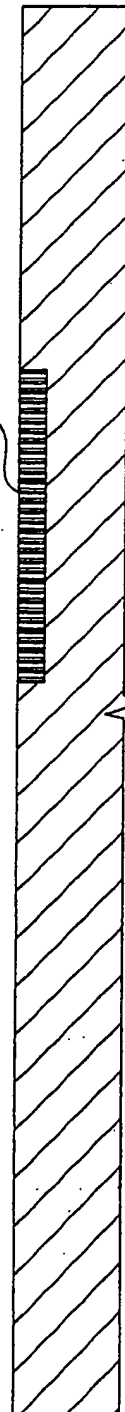
FIG. 18



N-Well mask

FIG. 19

210



Implant N-Well

FIG. 20

12/81

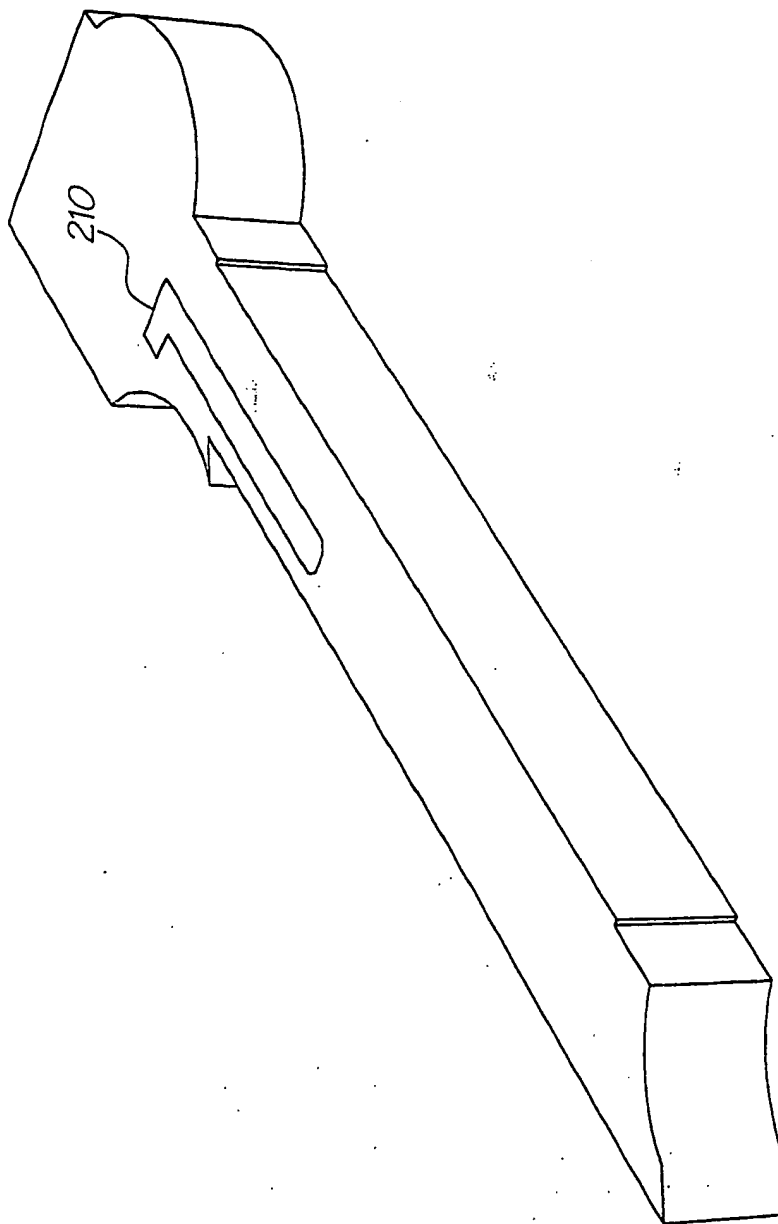
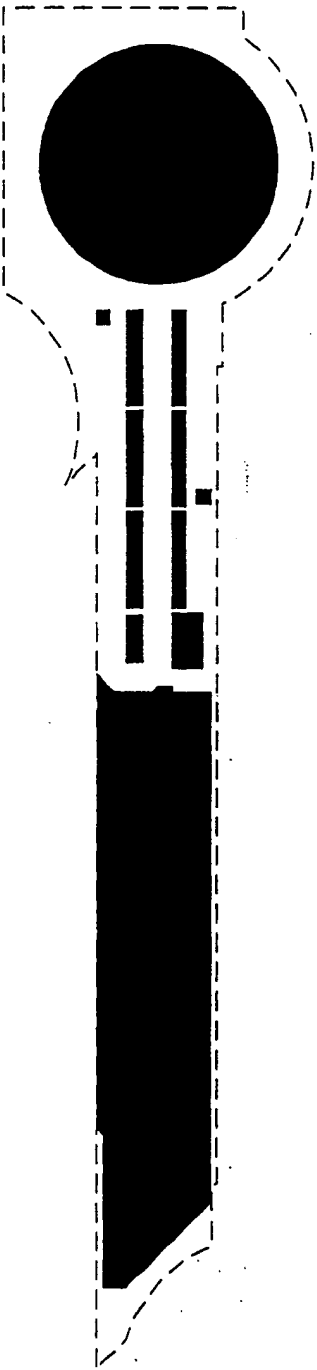


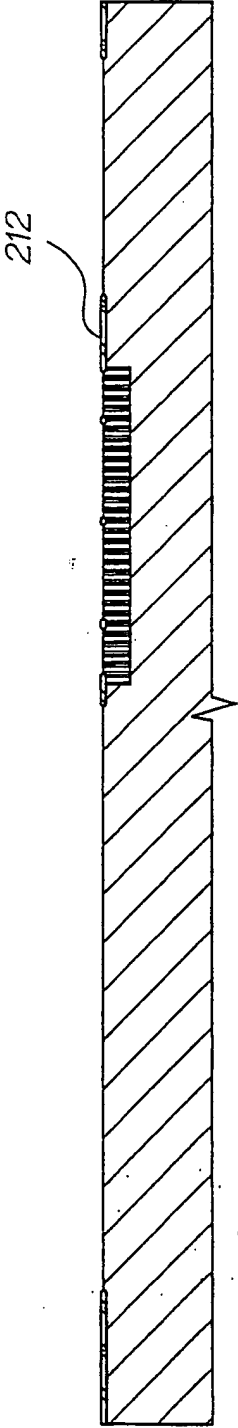
FIG. 21

FIG. 21



Active mask

FIG. 22



Grow field oxide

FIG. 23

FIG. 24a FIG. 24b

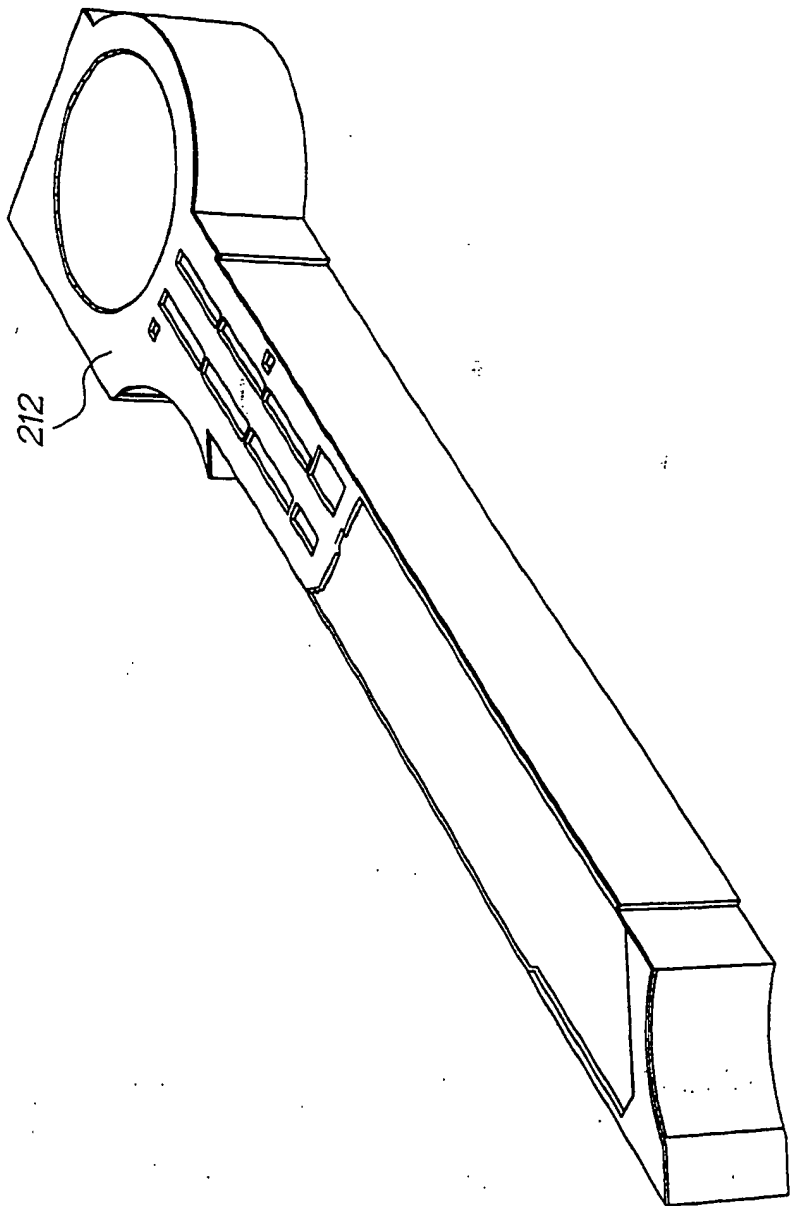
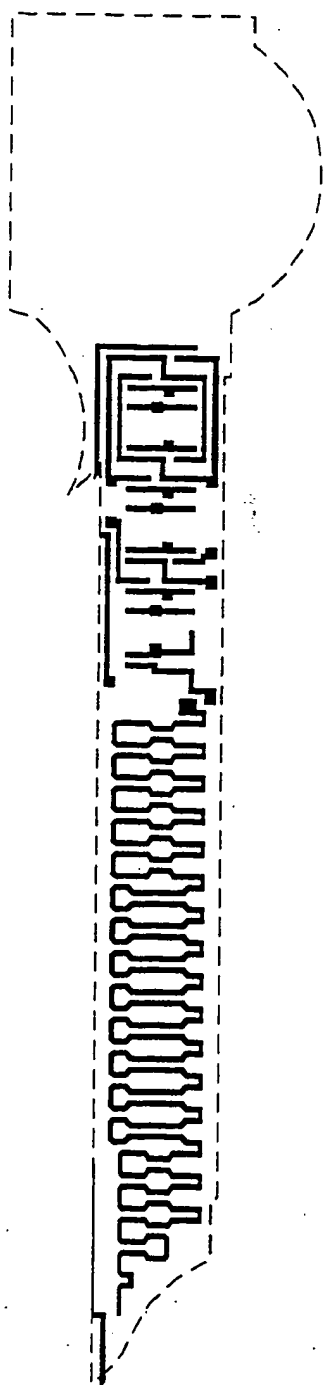


FIG. 24

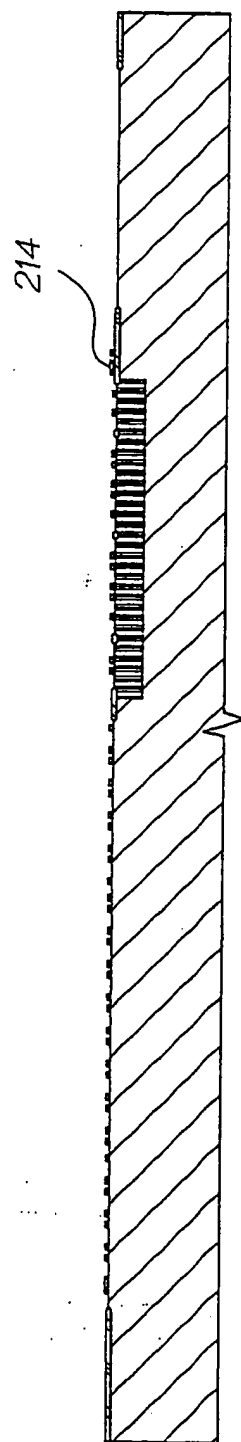
FIG. 24

15/81



Poly mask

FIG. 25



Deposit poly

FIG. 26

16/81

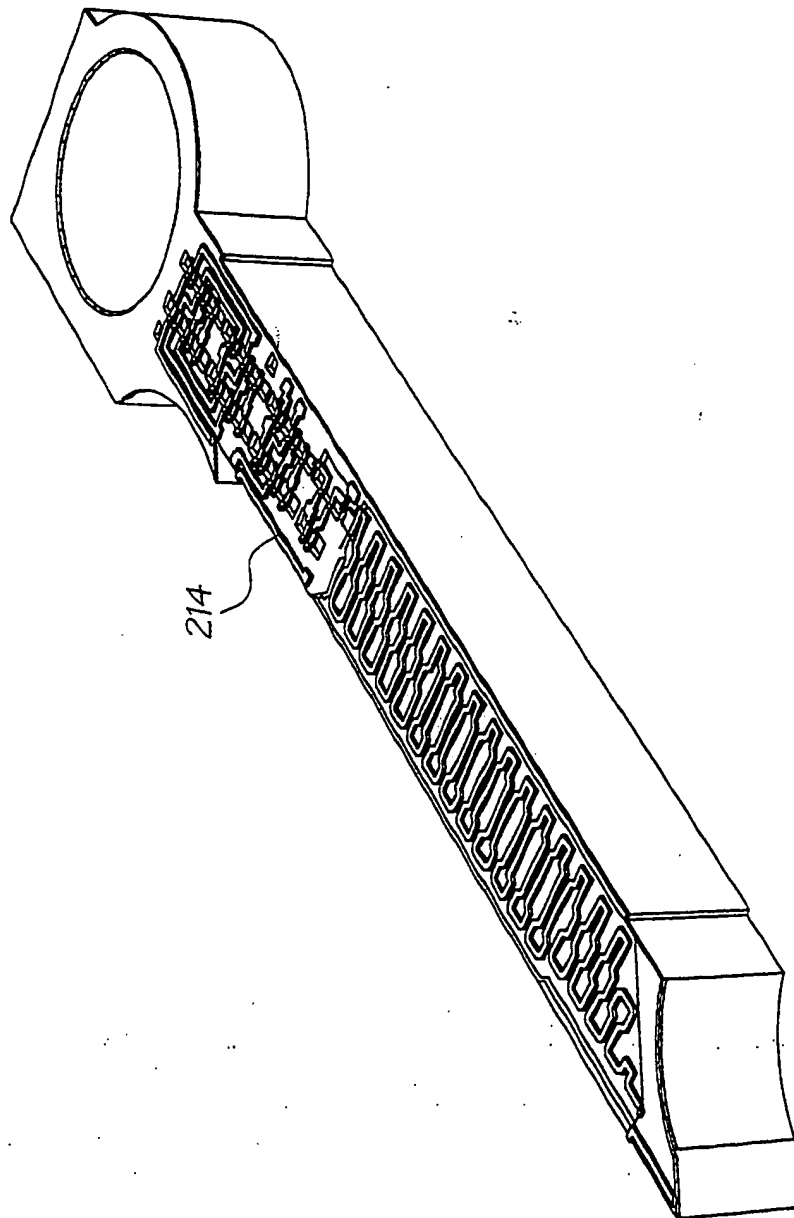
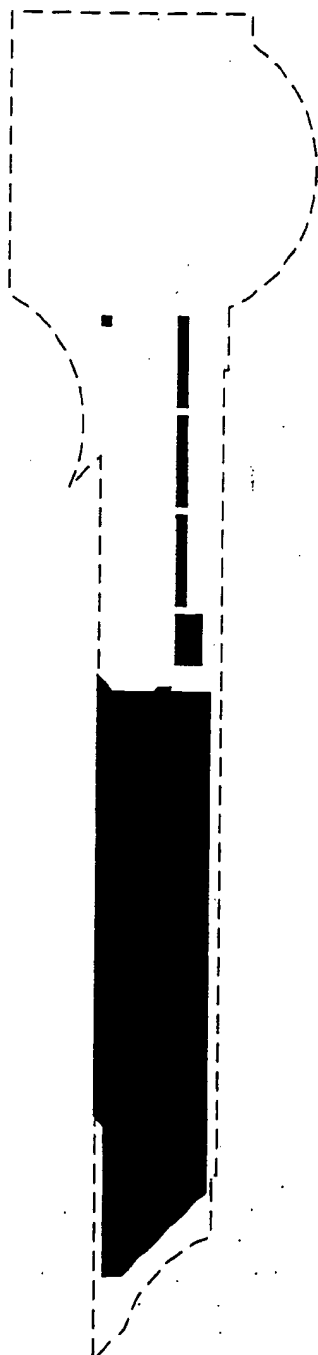


FIG. 27

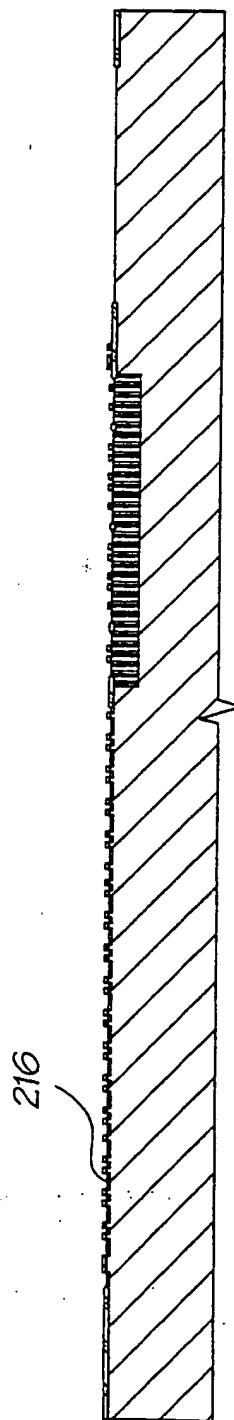
FIG. 27

17/81



n+ mask

FIG. 28



n+ implant

FIG. 29

216

FIG. 28

18/81

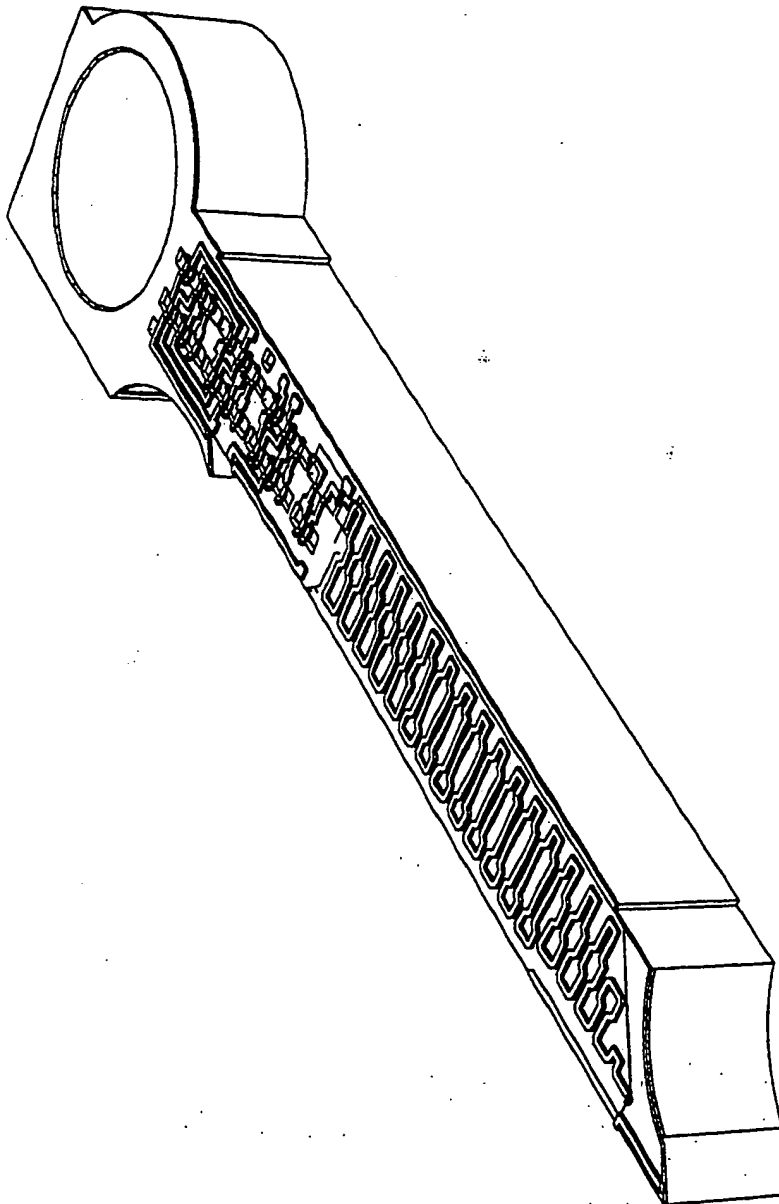


FIG. 30

FIG. 30

19/81

FIG. 31

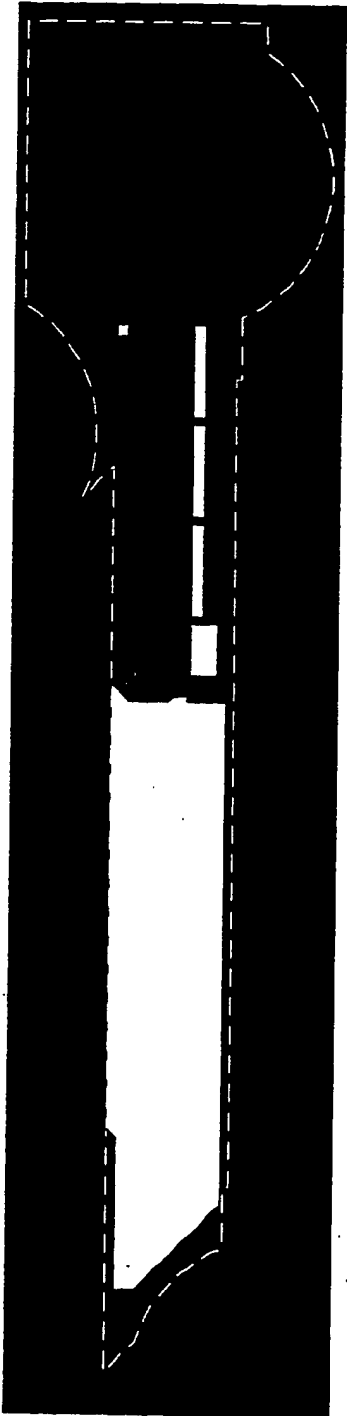


FIG. 31

218

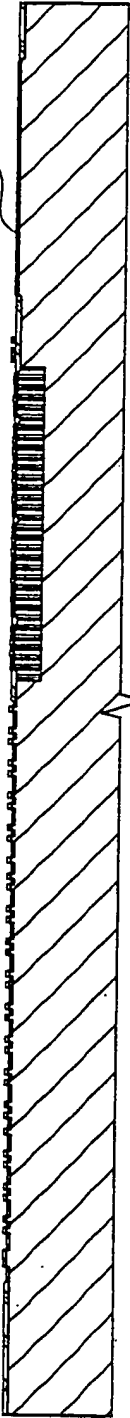


FIG. 32

20/81

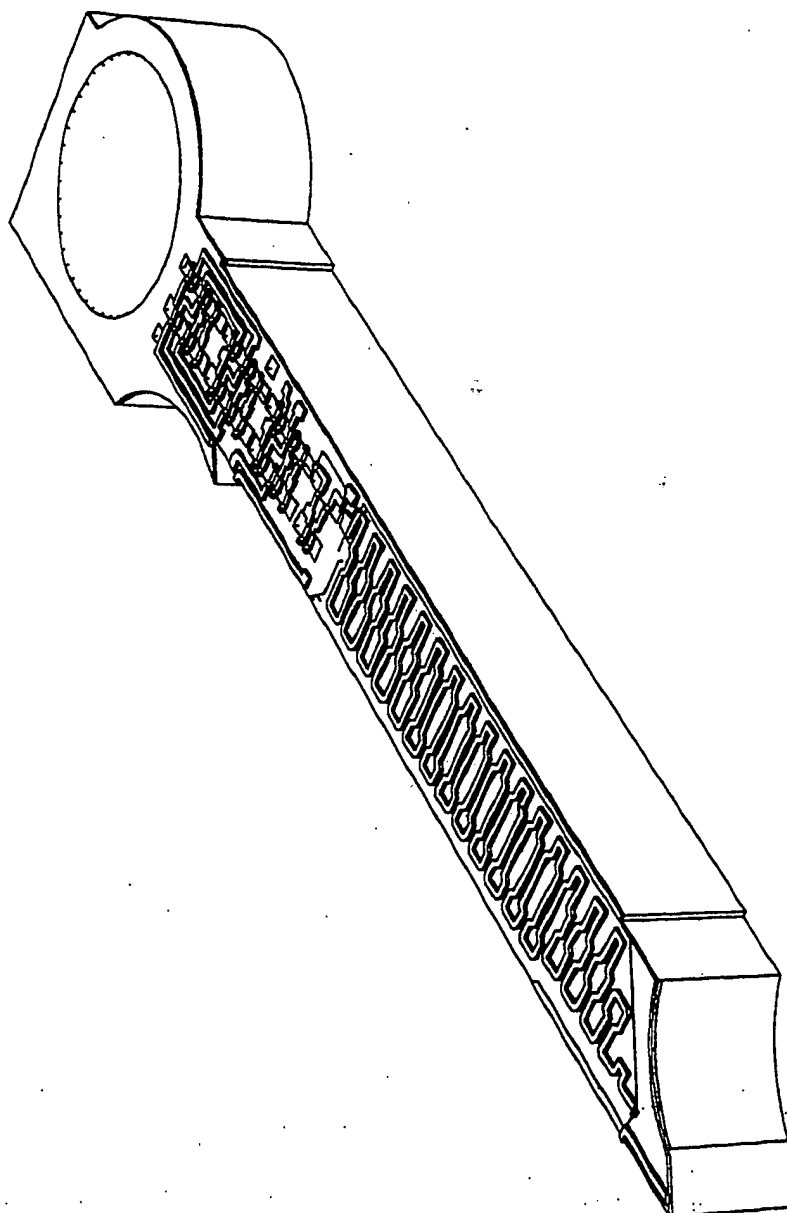
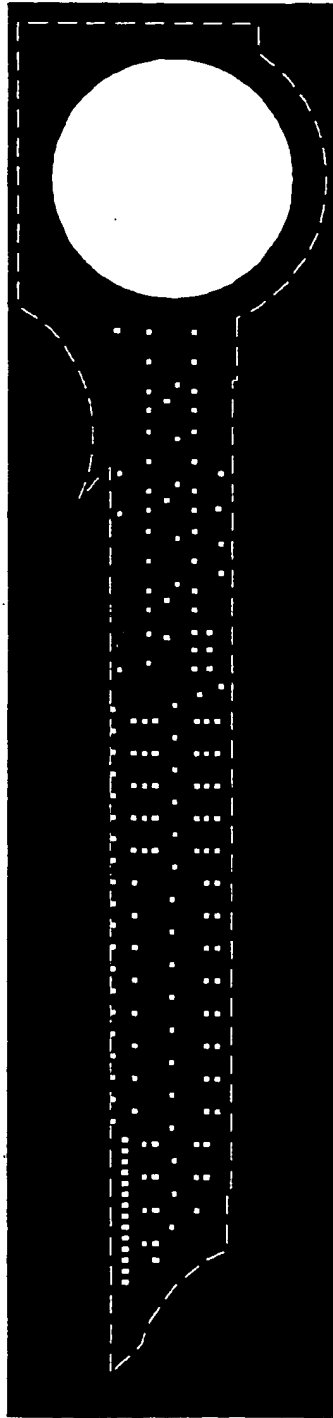


FIG. 33

TOP VIEW

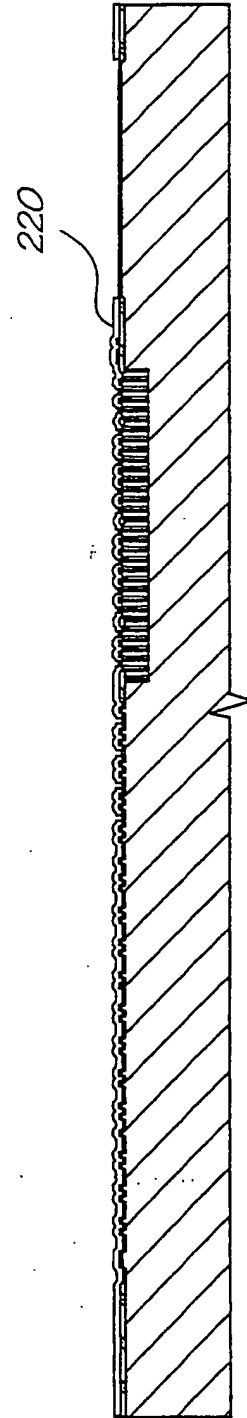
21/81

FIG. 34



Contacts mask

FIG. 34



Deposit ILD 1, etch contacts

FIG. 35

22/81

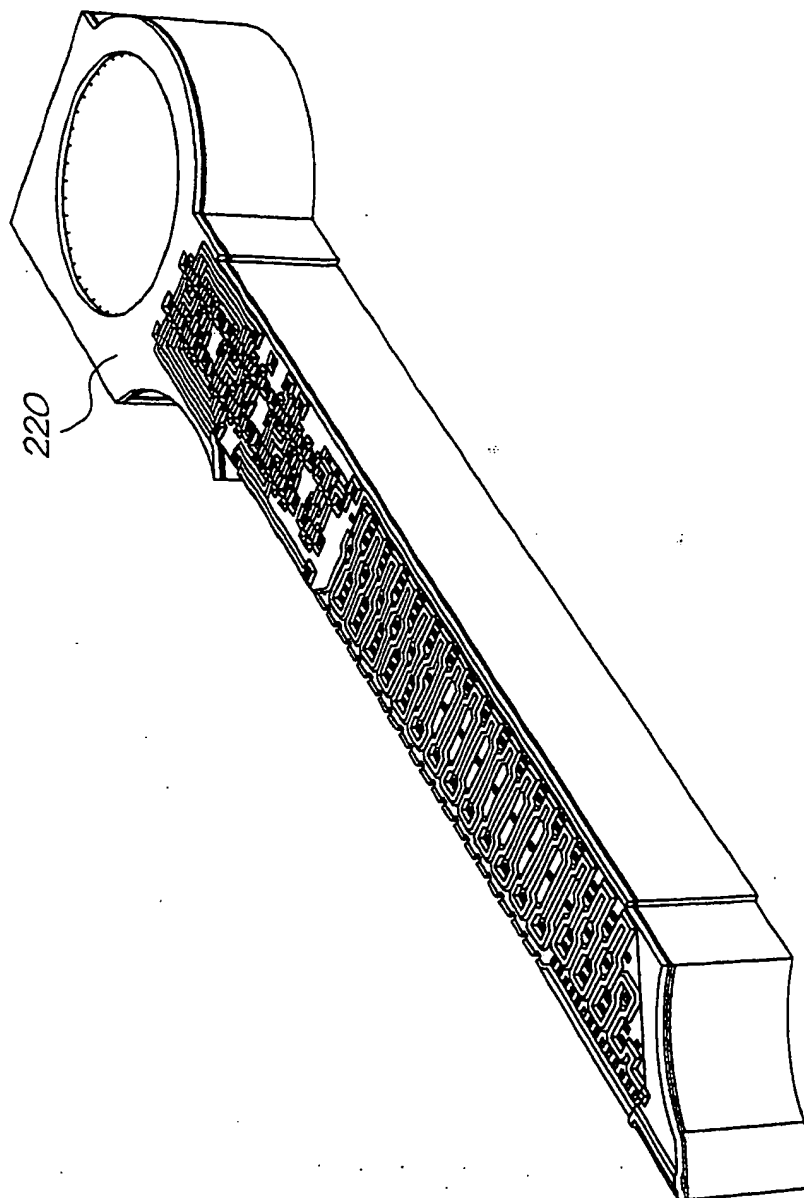
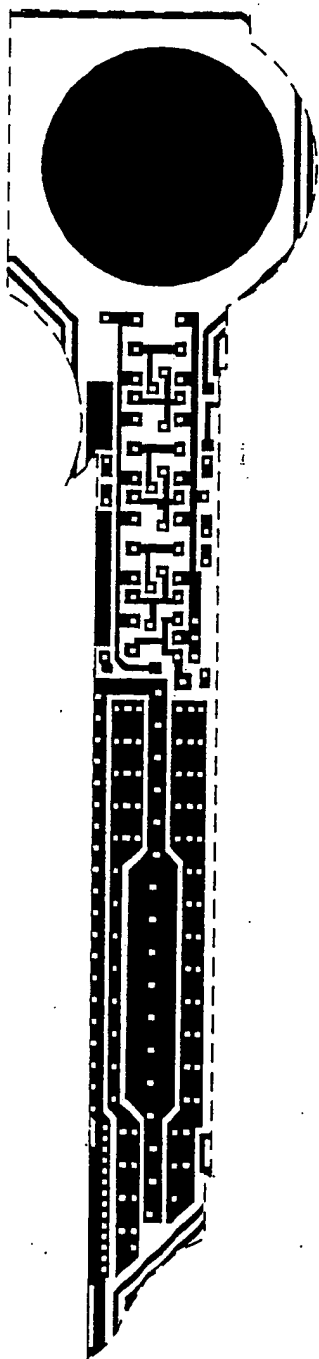


FIG. 36

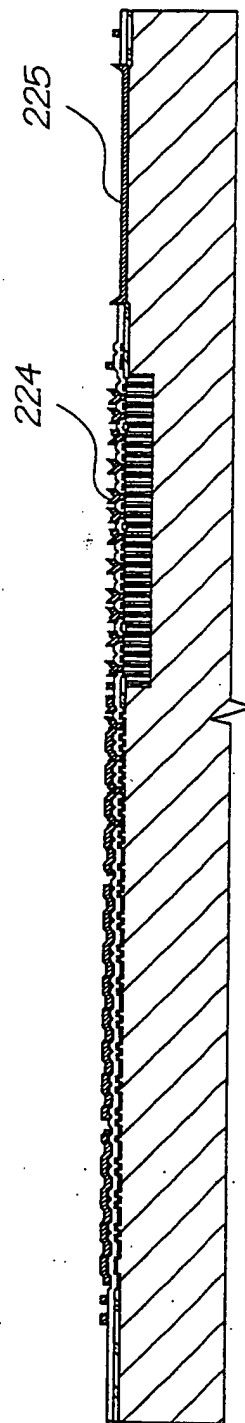
FIG. 36

23/81



Metal 1 mask

FIG. 37



Deposit Metal 1

FIG. 38

FIG. 37

24/81

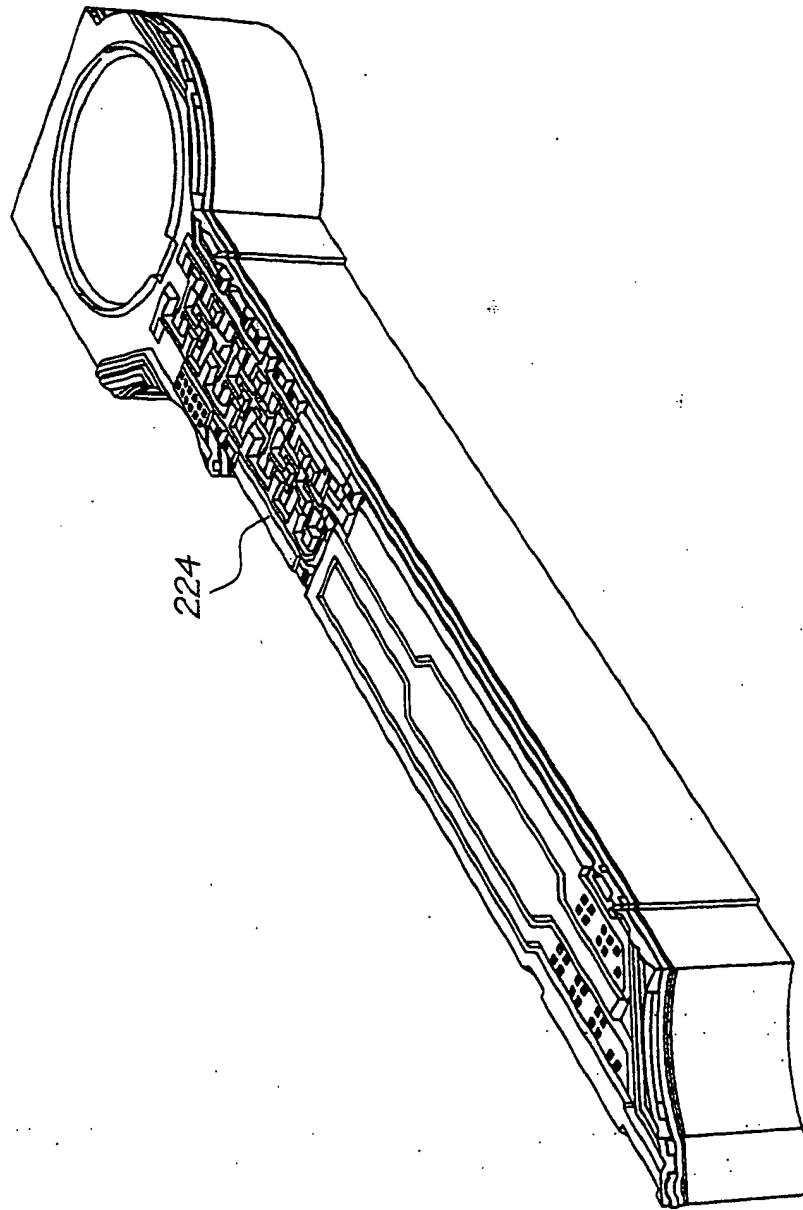


FIG. 39

FIG. 39

25/81

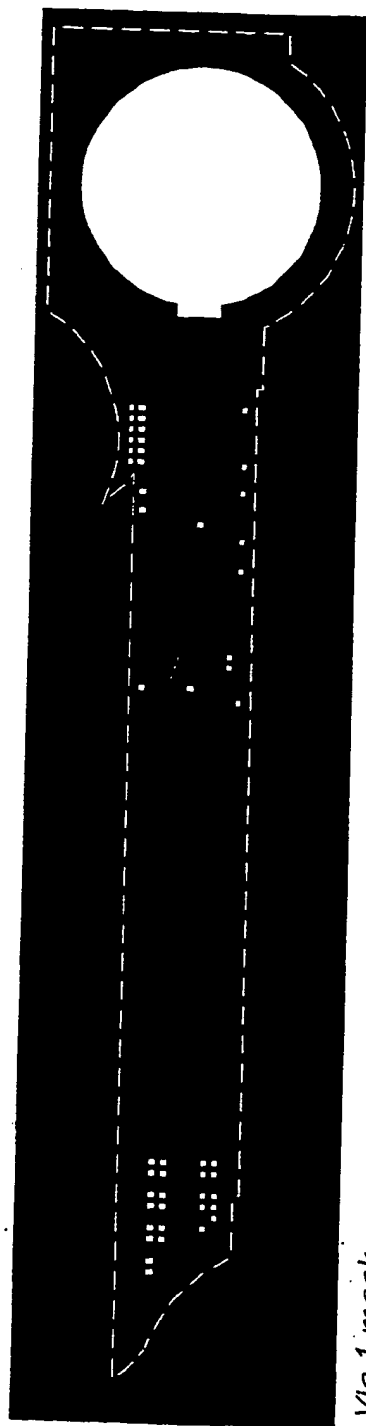


FIG. 40

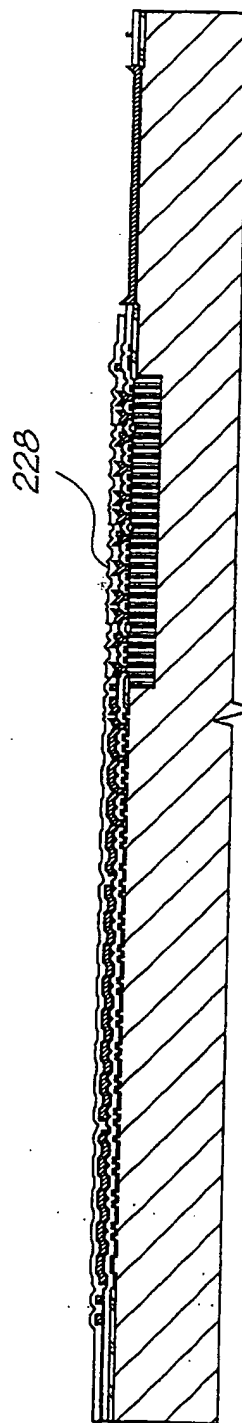
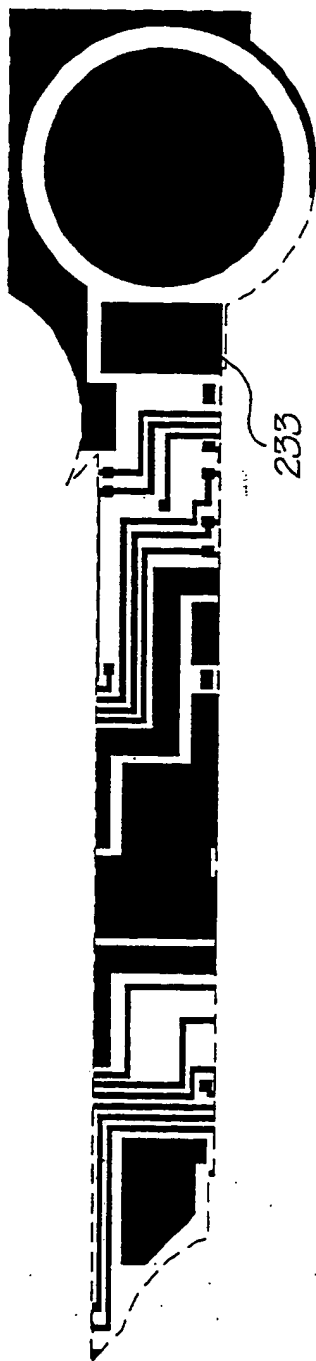


FIG. 41

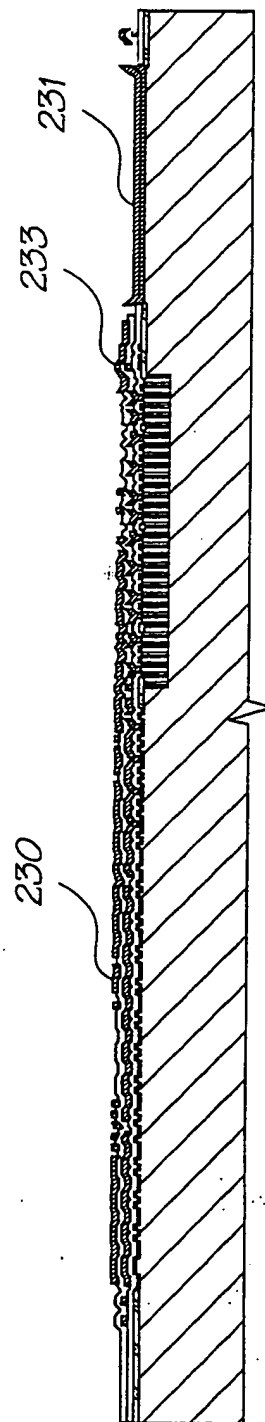
FIG. 40

26/81



Metal 2 mask

FIG. 42



Deposit metal 2

FIG. 43

27/81

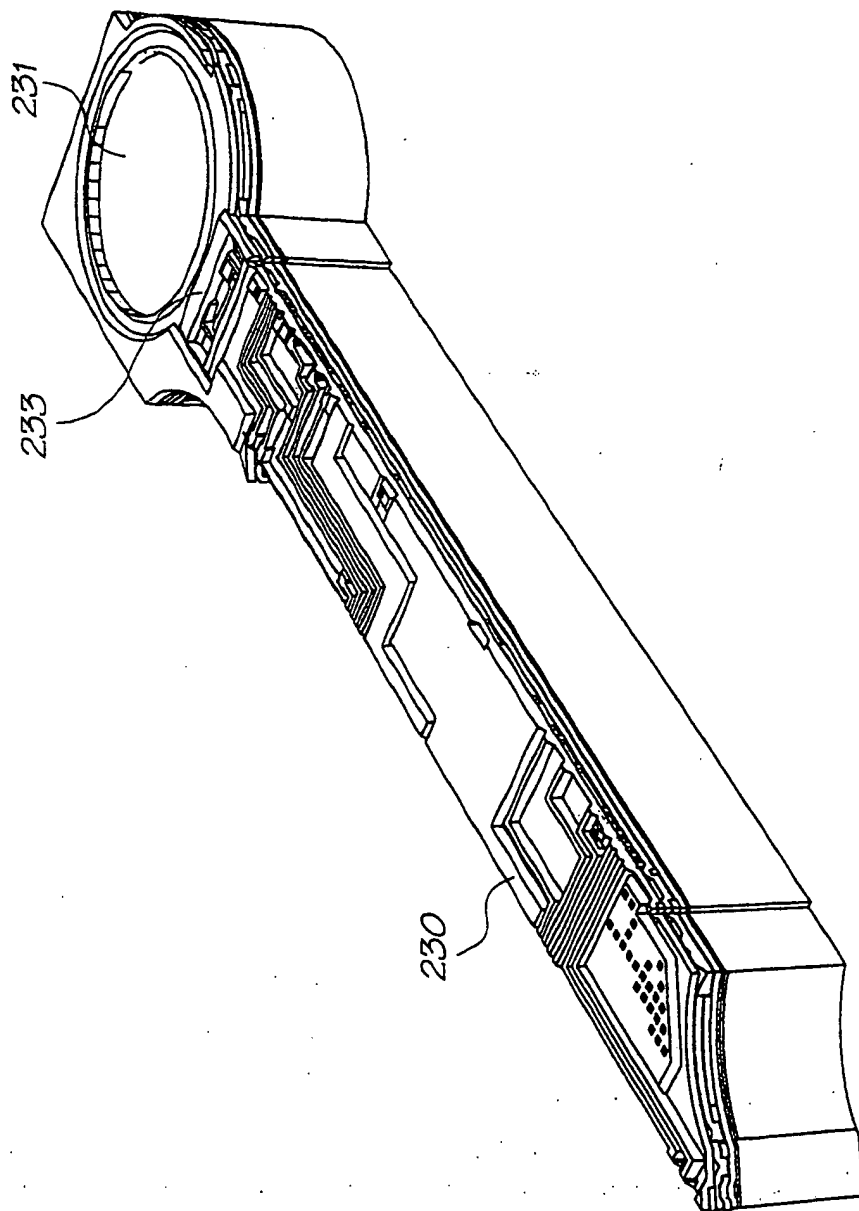
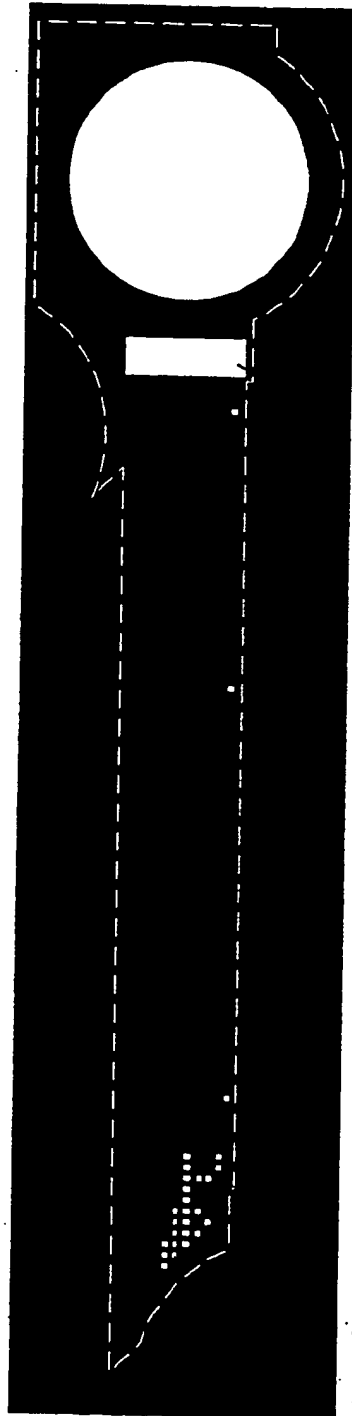


FIG. 44

FIG. 44

28/81

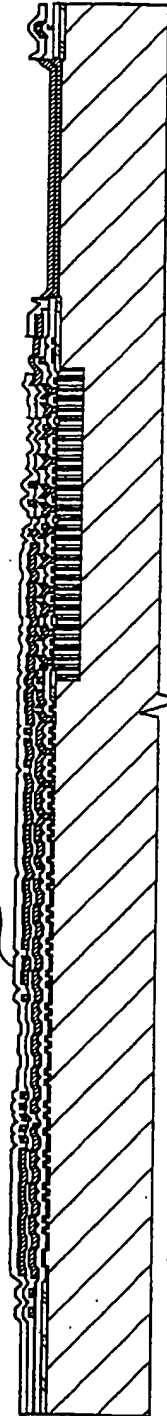
FIG. 45



Via 2 mask

FIG. 45

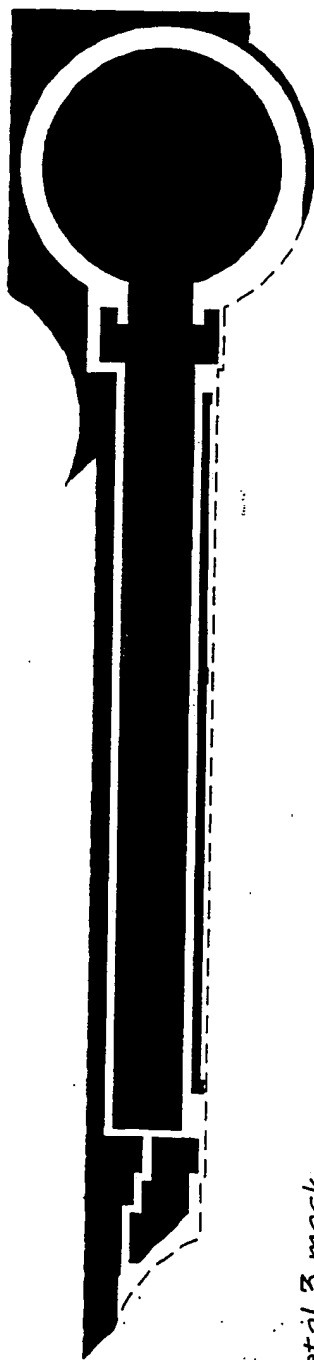
236



Deposit ILD 3, etch vias

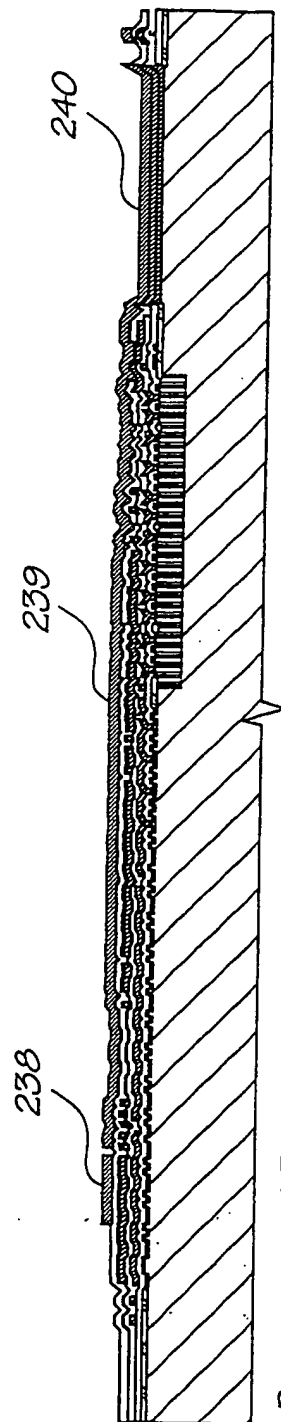
FIG. 46

29/81



Metal 3 mask

FIG. 47



Deposit metal 3

FIG. 48

FIG. 47

30/81

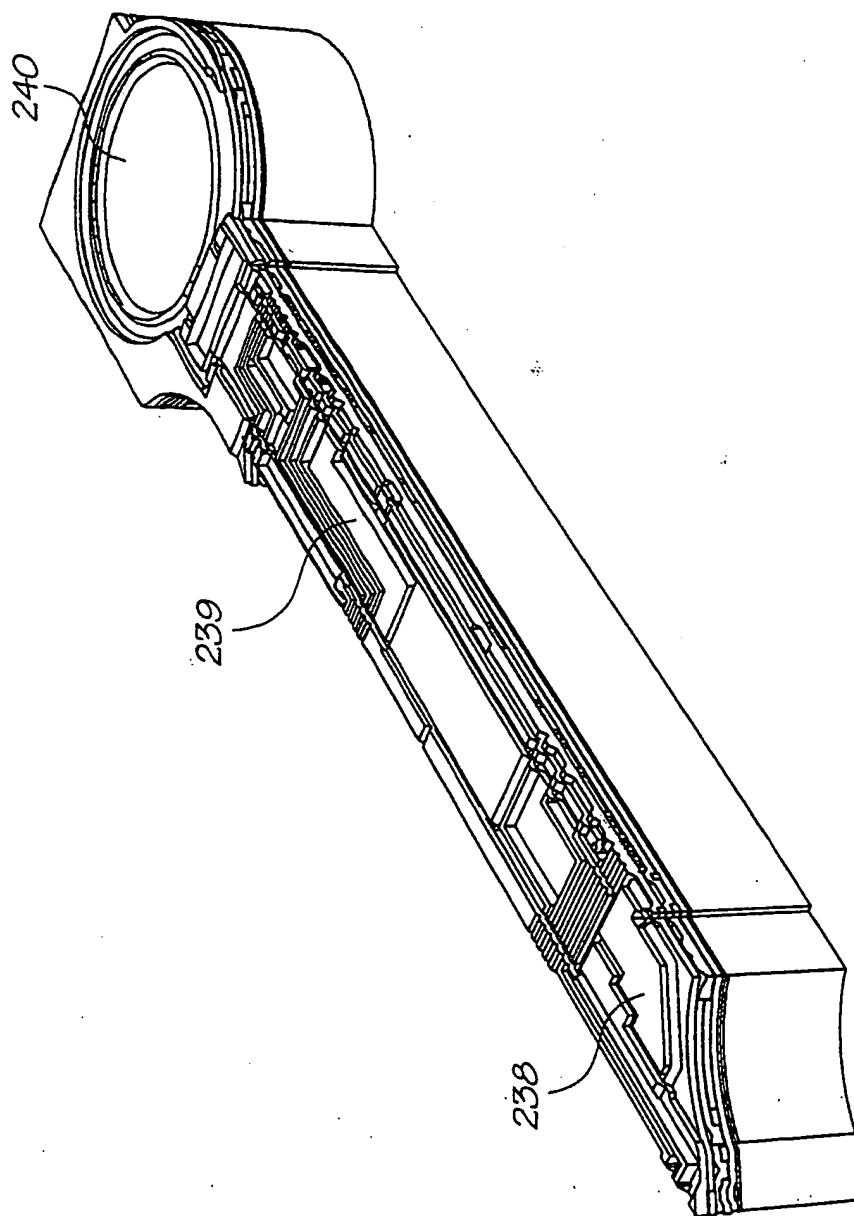
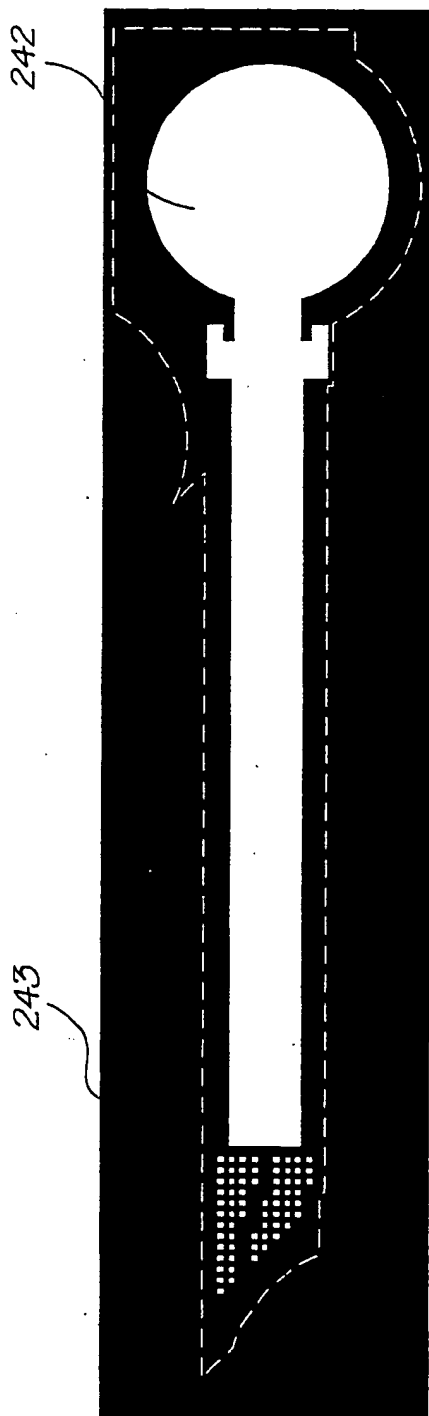


FIG. 49

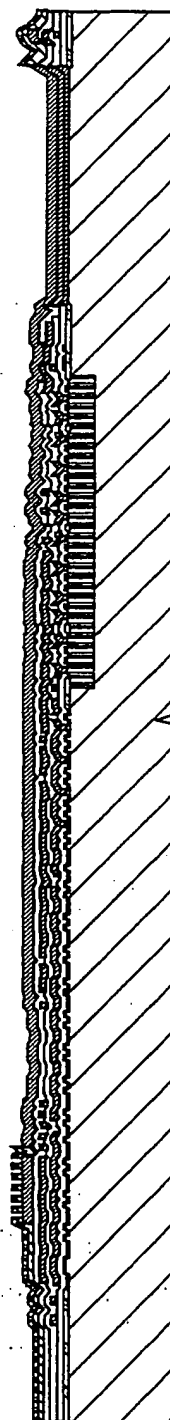
FIG. 49

31/81



Via 3 / Passivation mask

FIG. 50



Deposit passivation oxide & nitride, etch vias

FIG. 51

FIG. 50

32/81

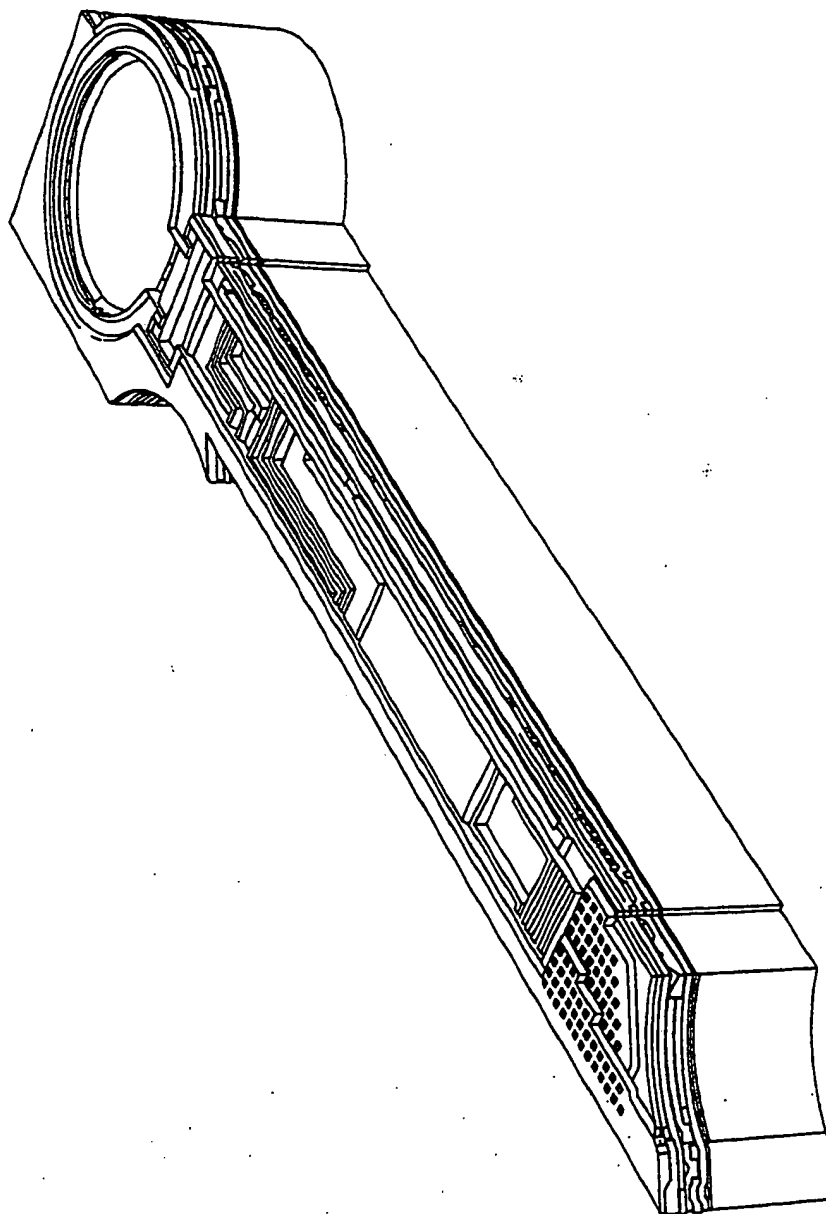
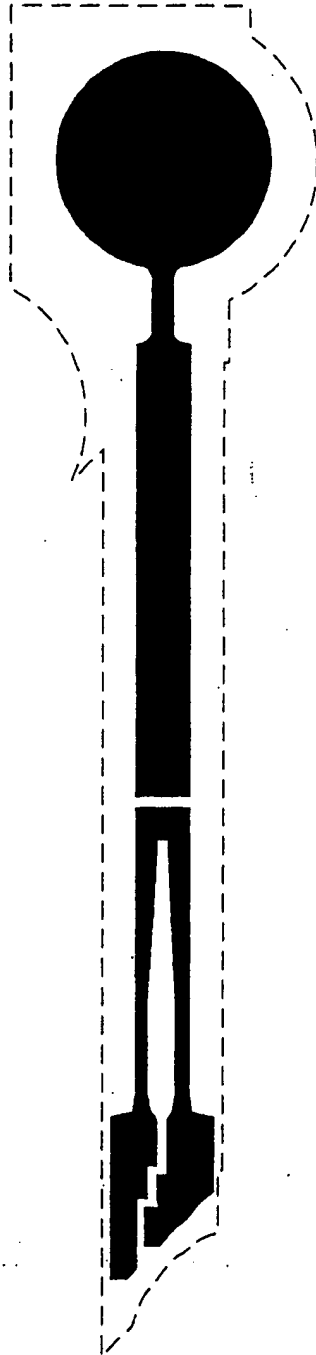


FIG. 52

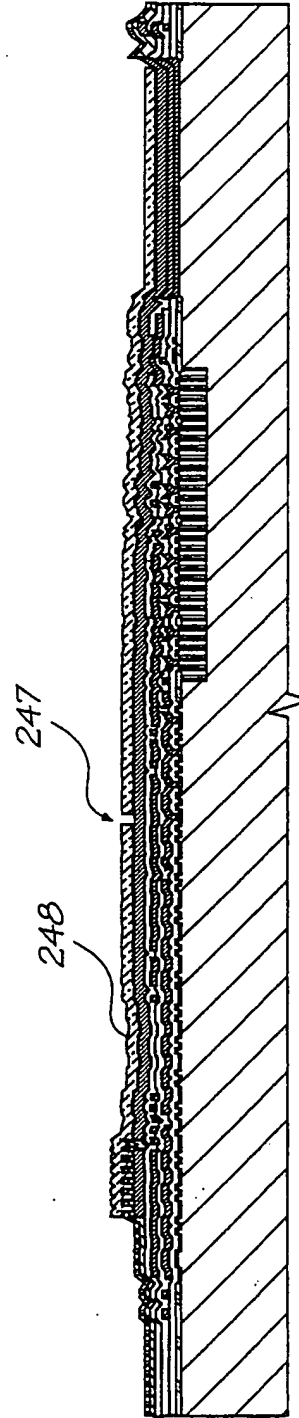
FIG. 52

33/81



Heater mask

FIG. 53



Deposit heater TiN

FIG. 54

34/81

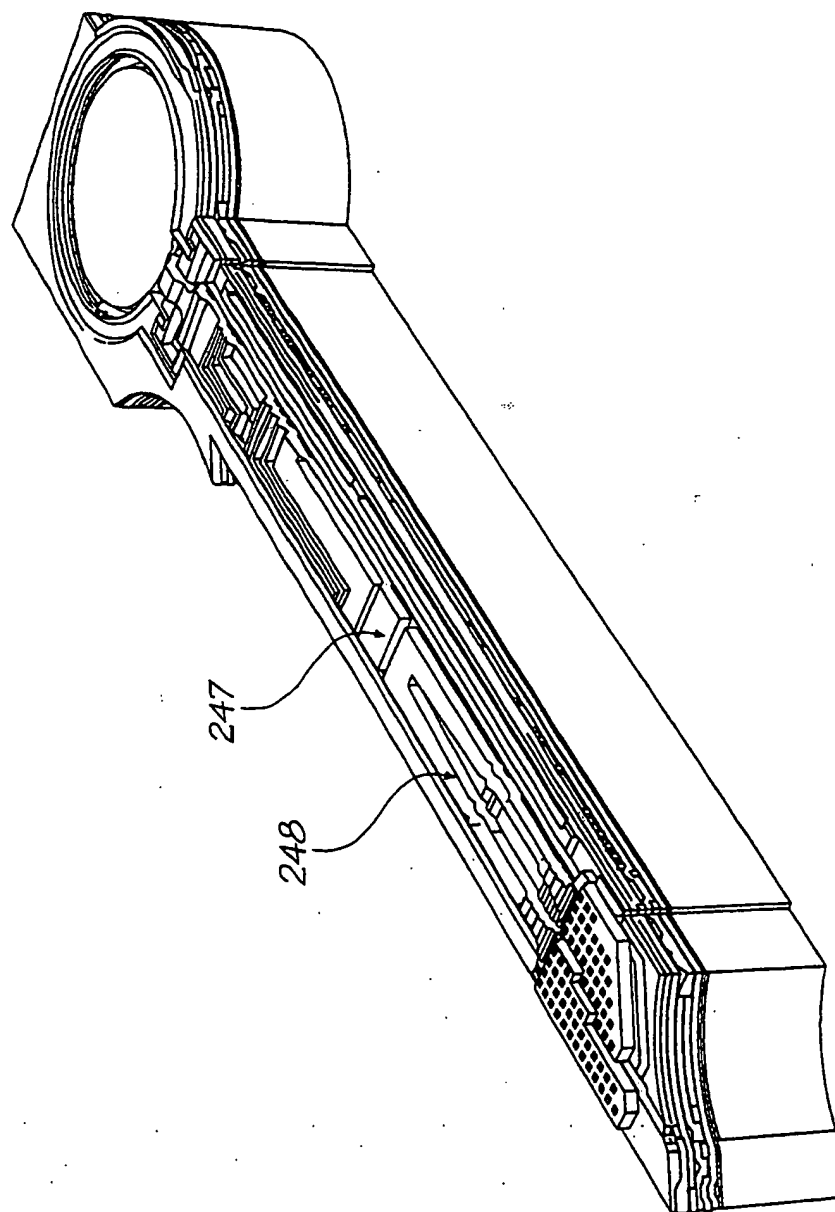
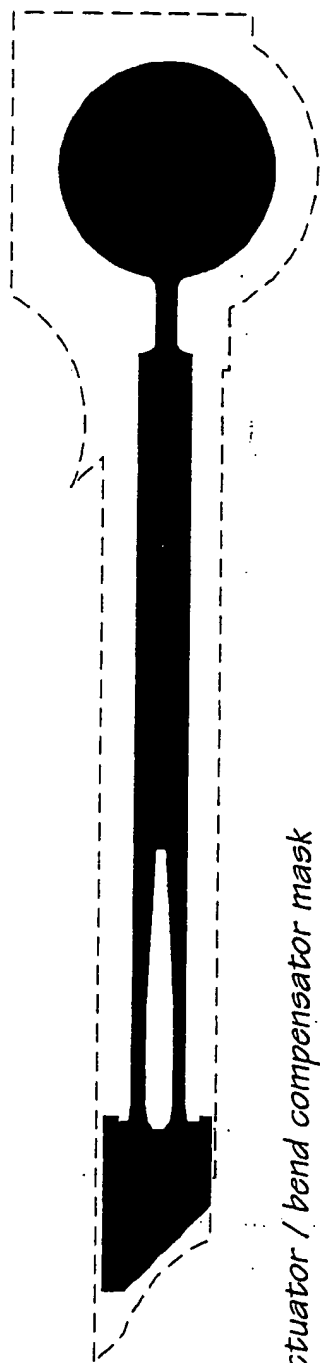


FIG. 55

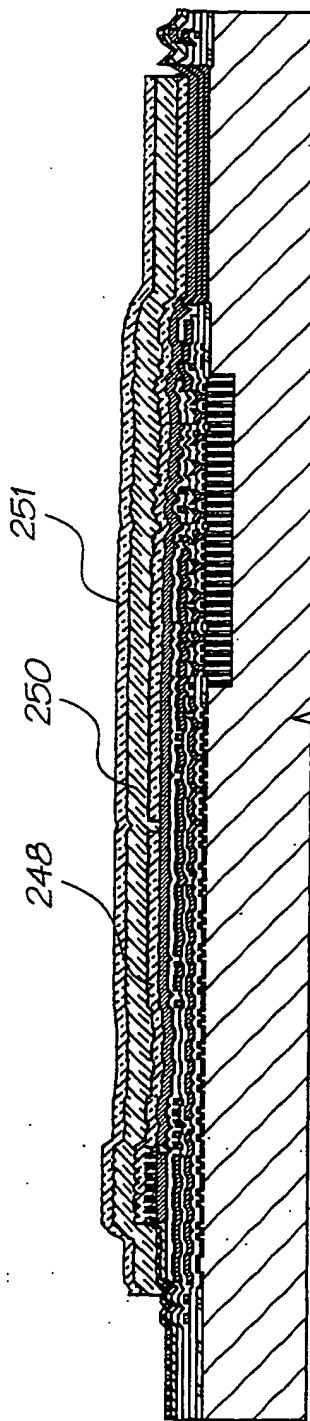
FIG. 55

35/81



Actuator / bend compensator mask

FIG. 56



Deposit actuator glass and bend compensator TiN, etch together

FIG. 57

36/81

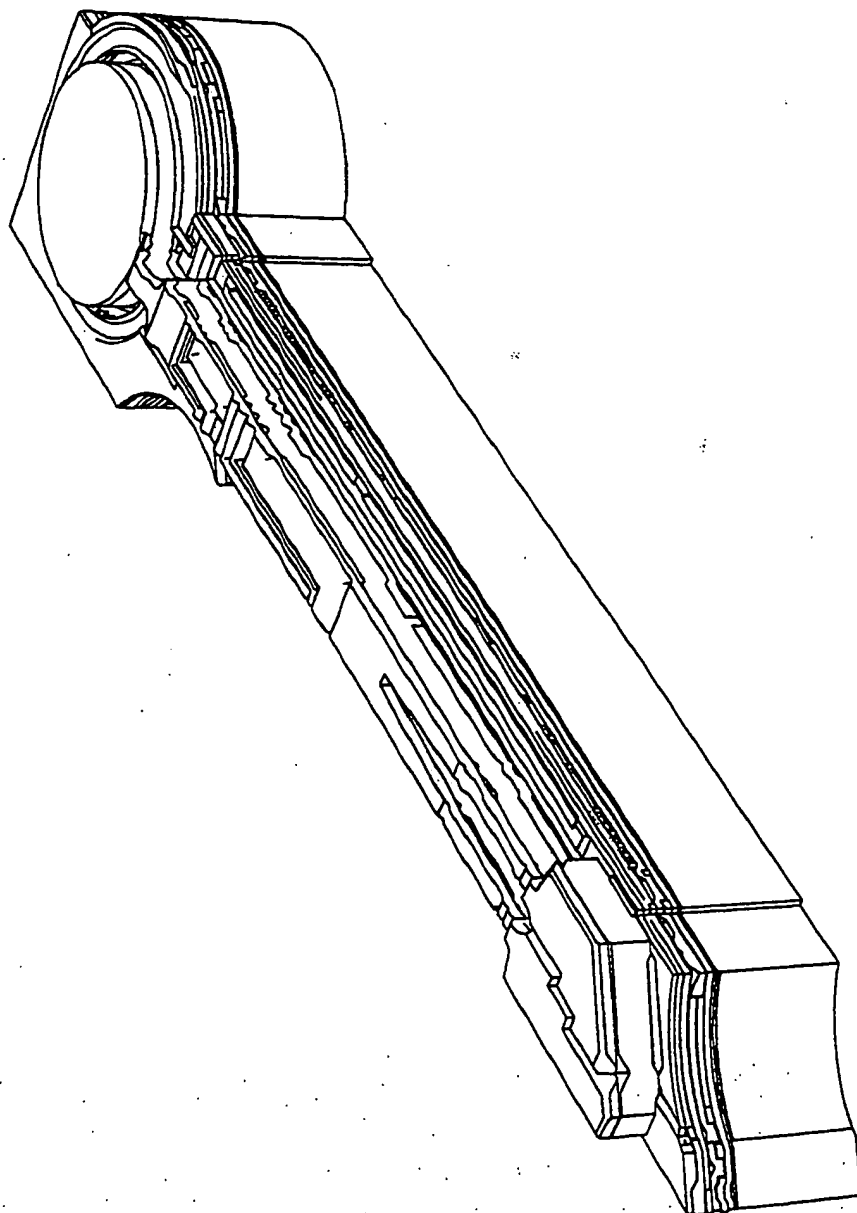
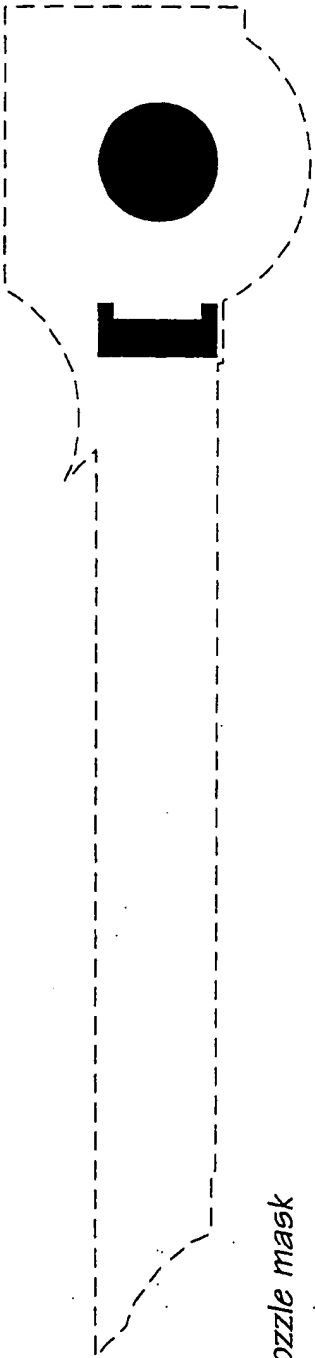


FIG. 58

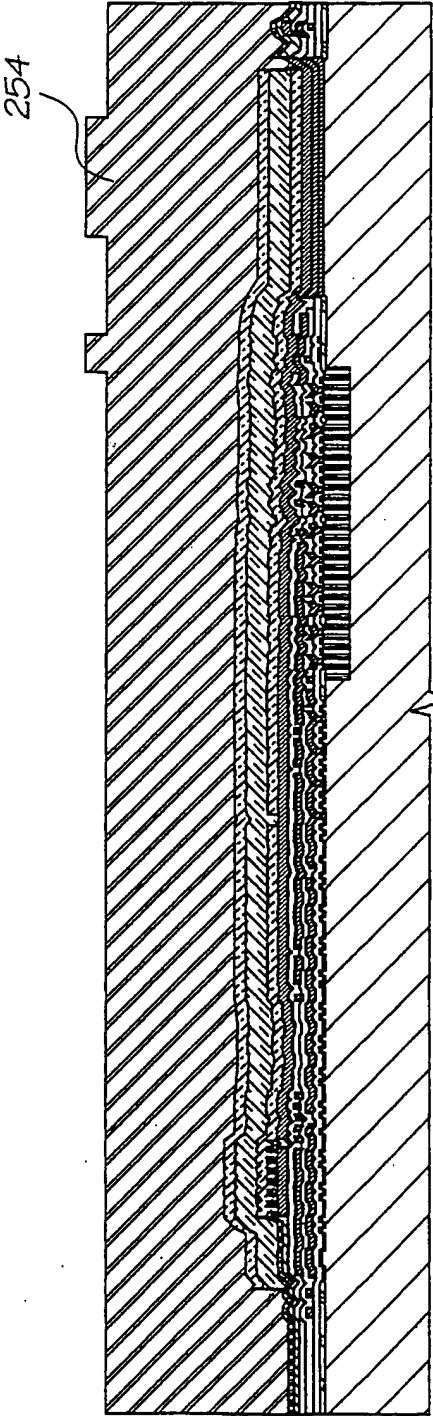
FIG. 58

37/81



Nozzle mask

FIG. 59



Deposit sacrificial layer, etch nozzles

FIG. 60

FIG. 59

38/81

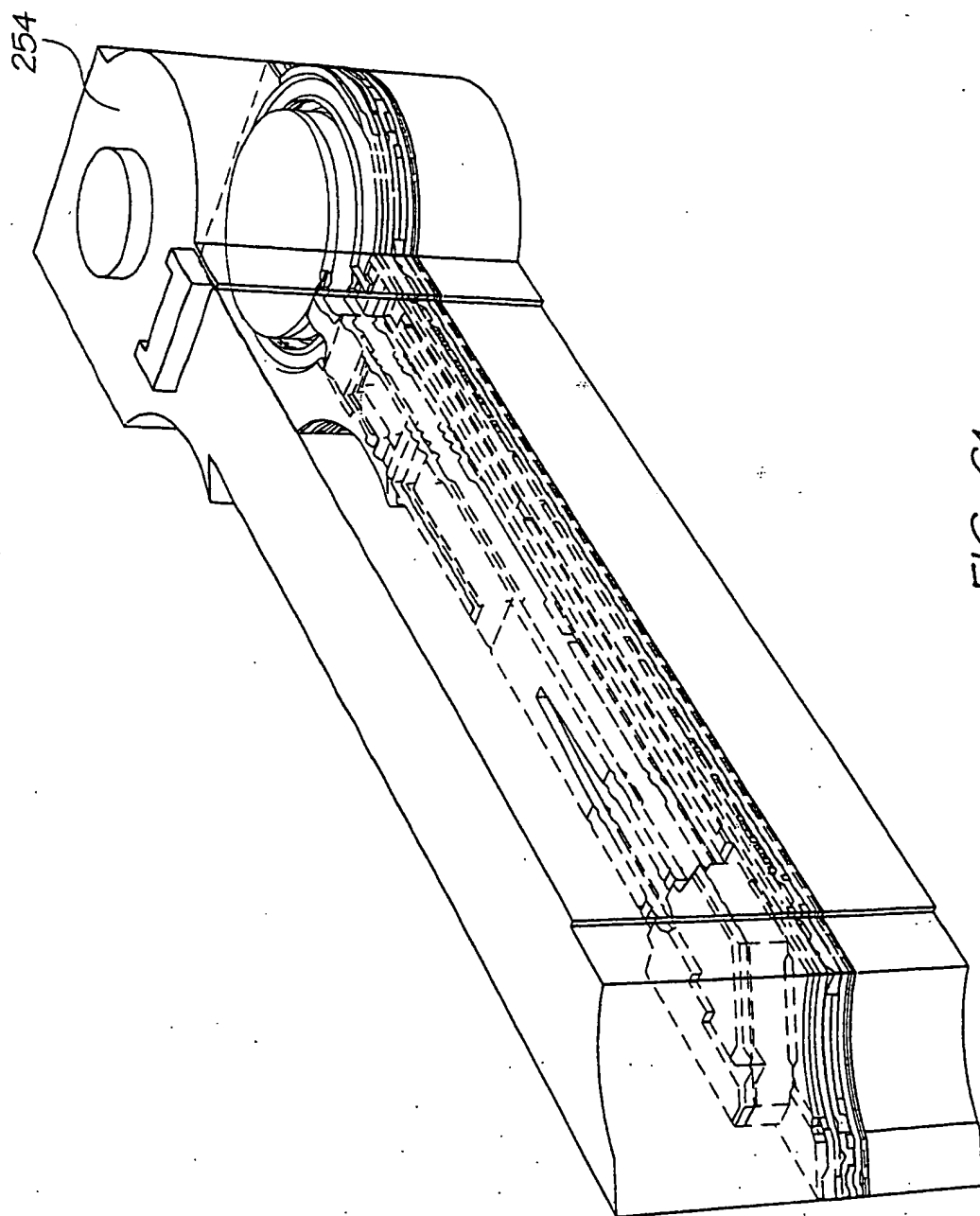
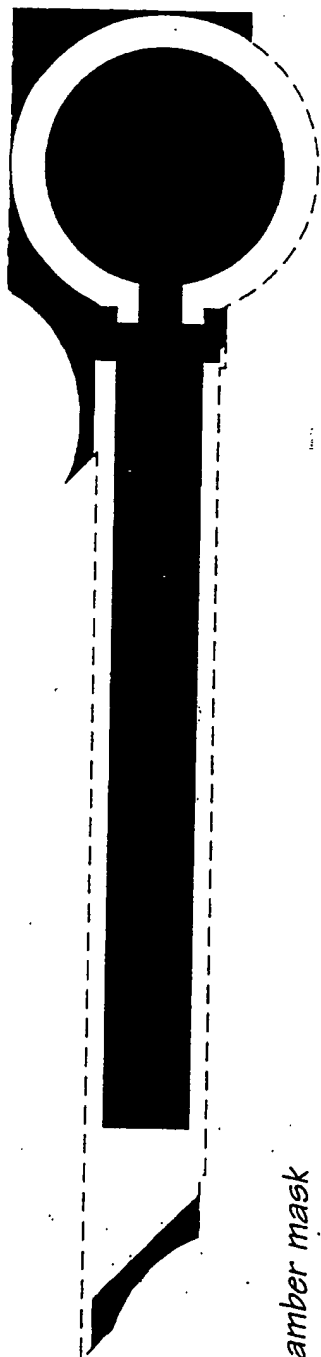


FIG. 61

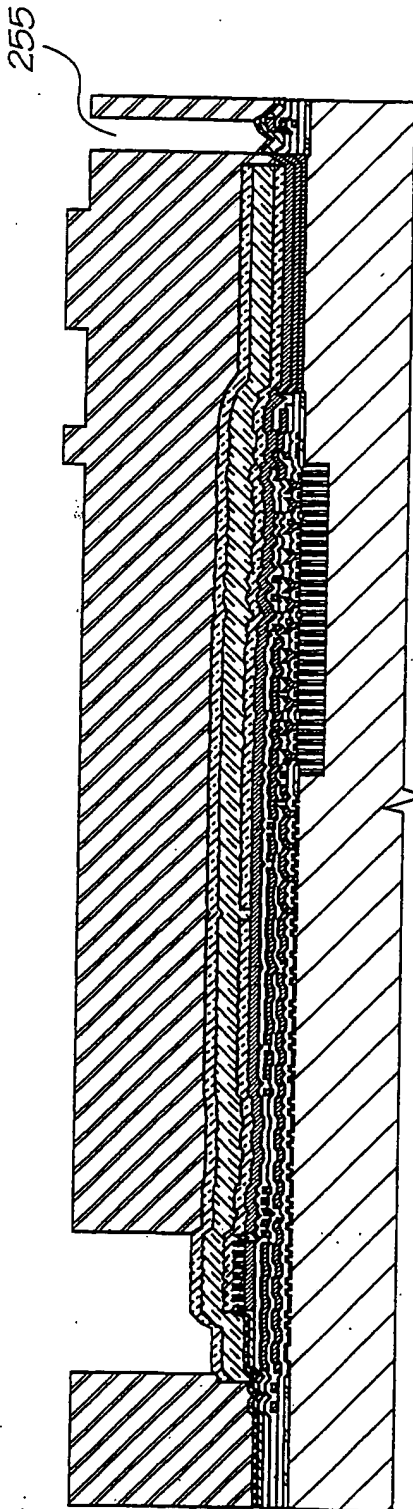
FIG. 61

39/81



Chamber mask

FIG. 62



Etch chambers in sacrificial layer

FIG. 63

40/81

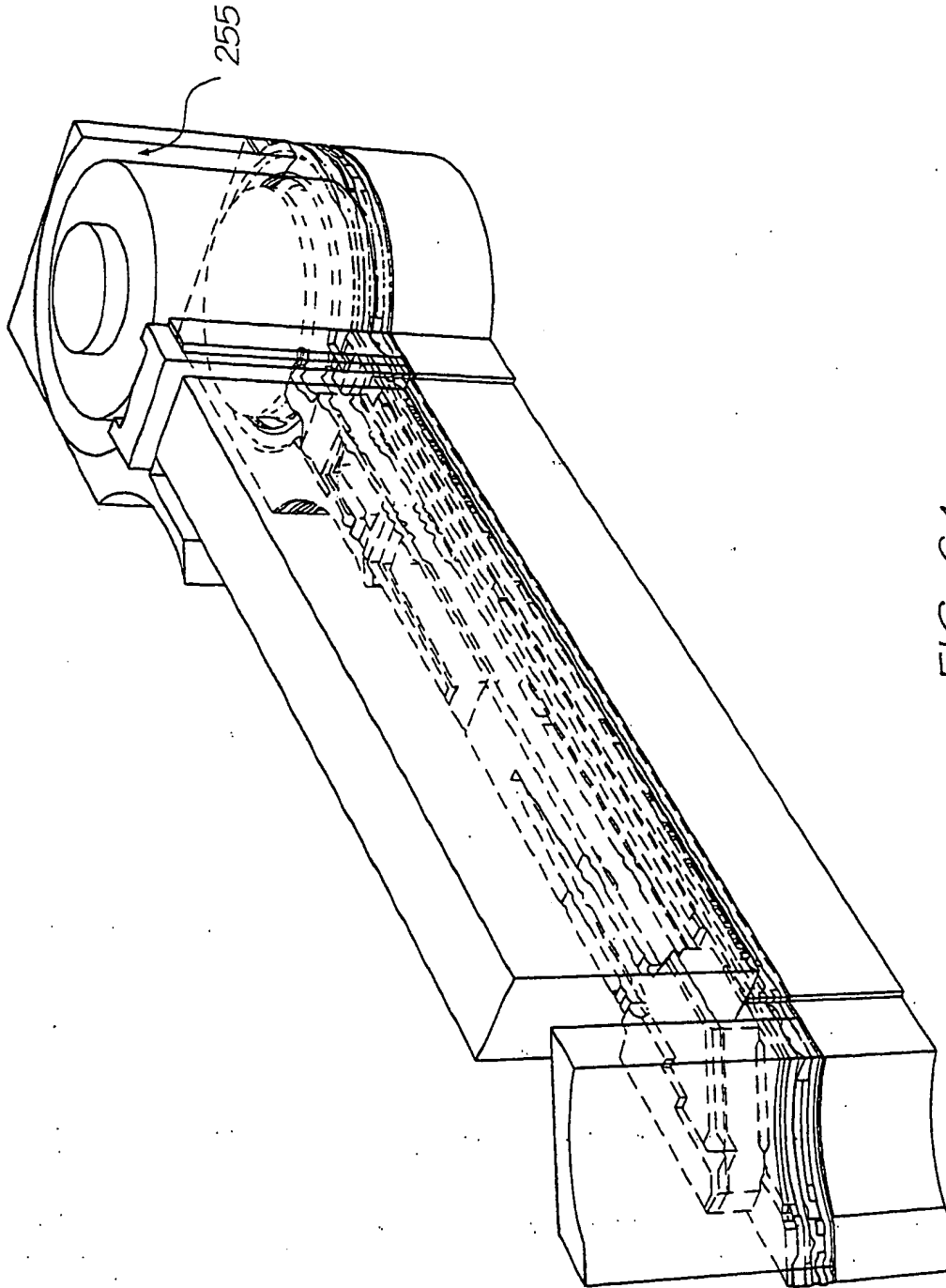
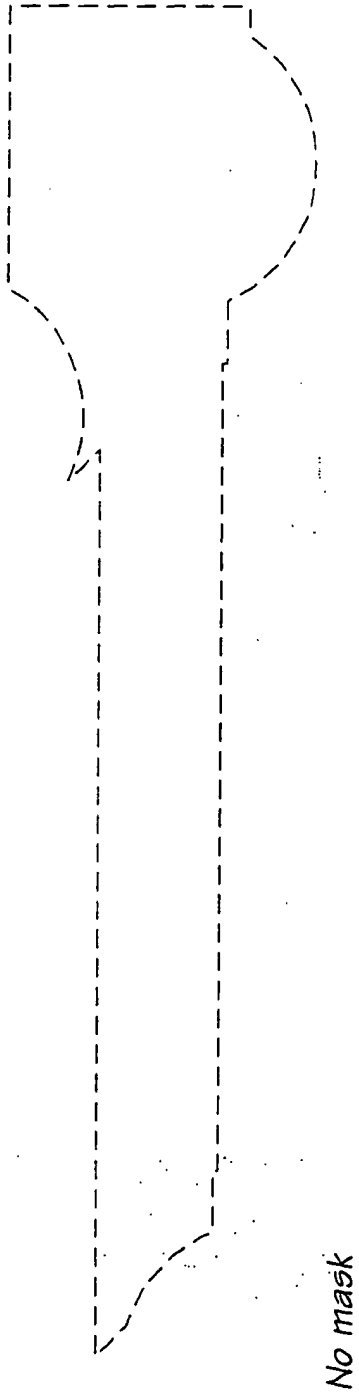


FIG. 64

FIG. 64

41/81

FIG. 64



257

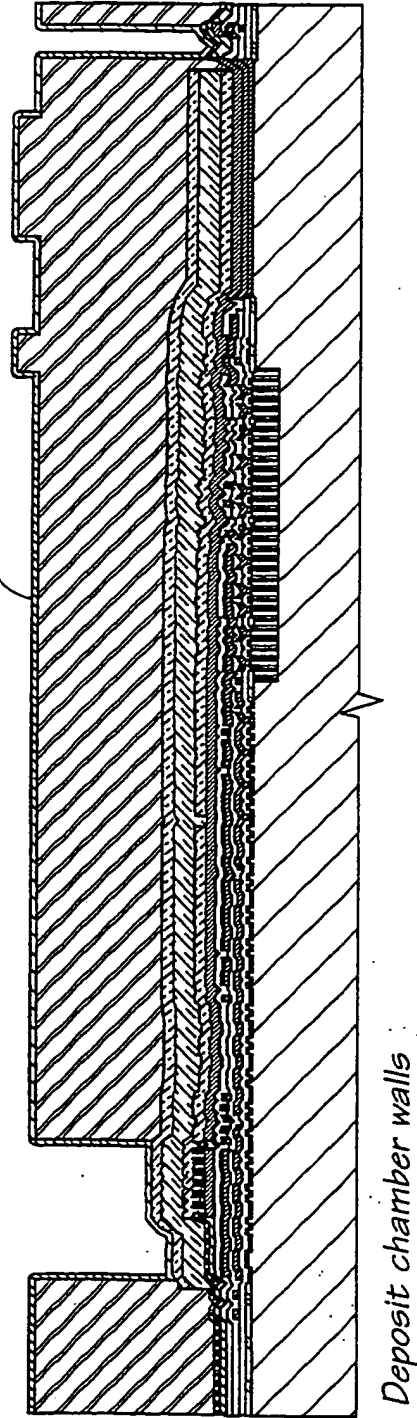


FIG. 65

42/81

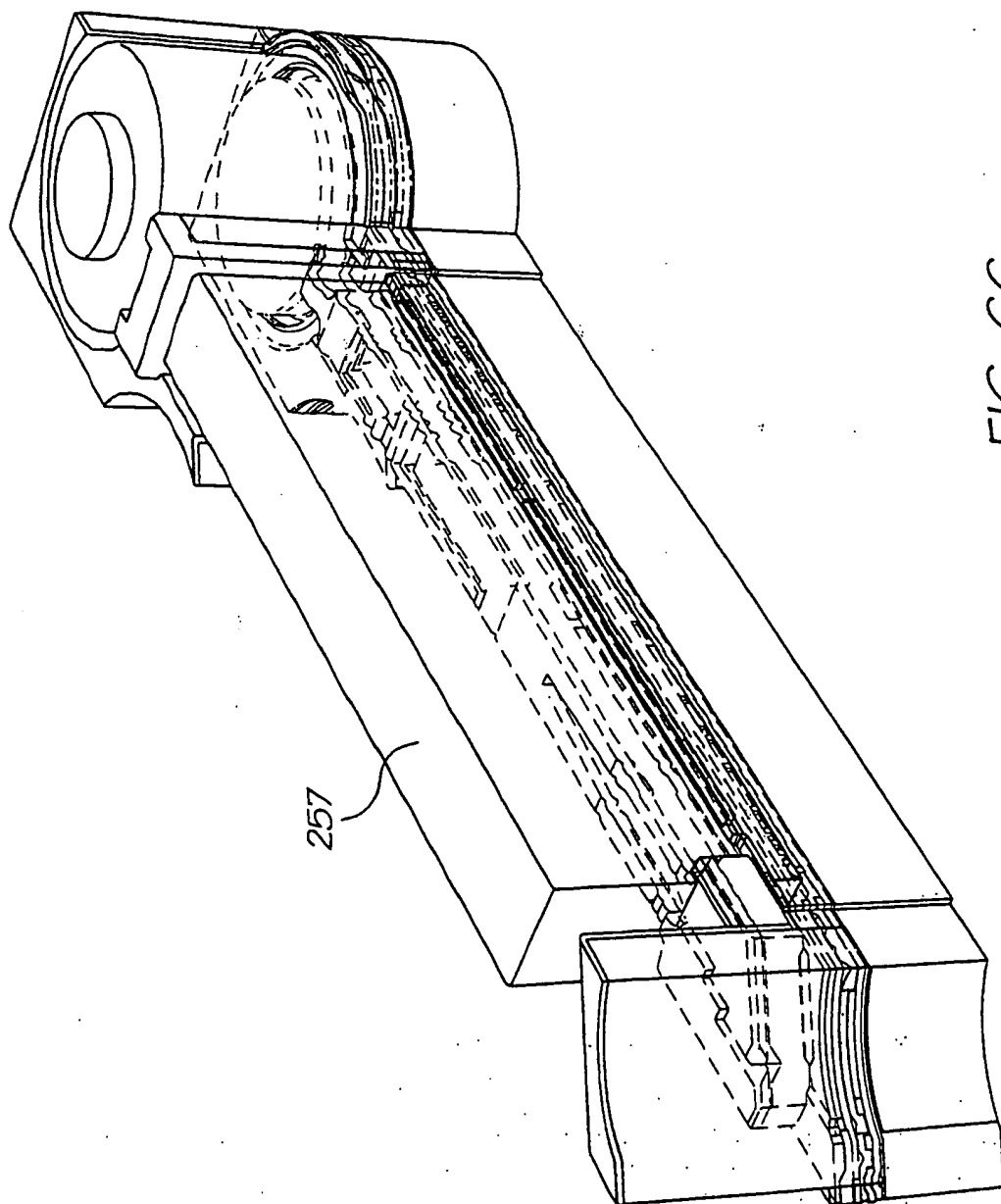
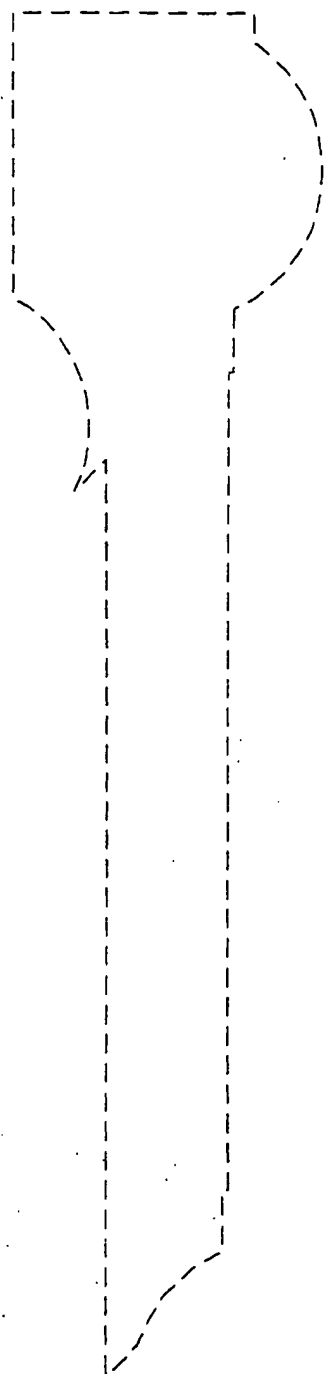


FIG. 66

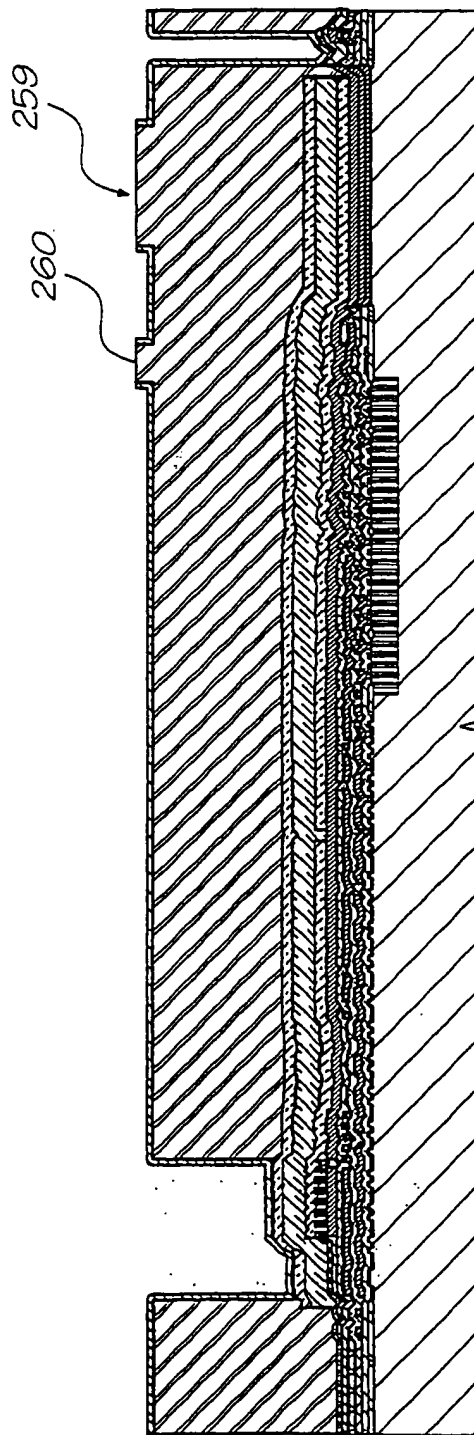
FIG. 66

43/81

FIG. 67



No mask



Form self-aligned nozzles using CMP

FIG. 67

44/81

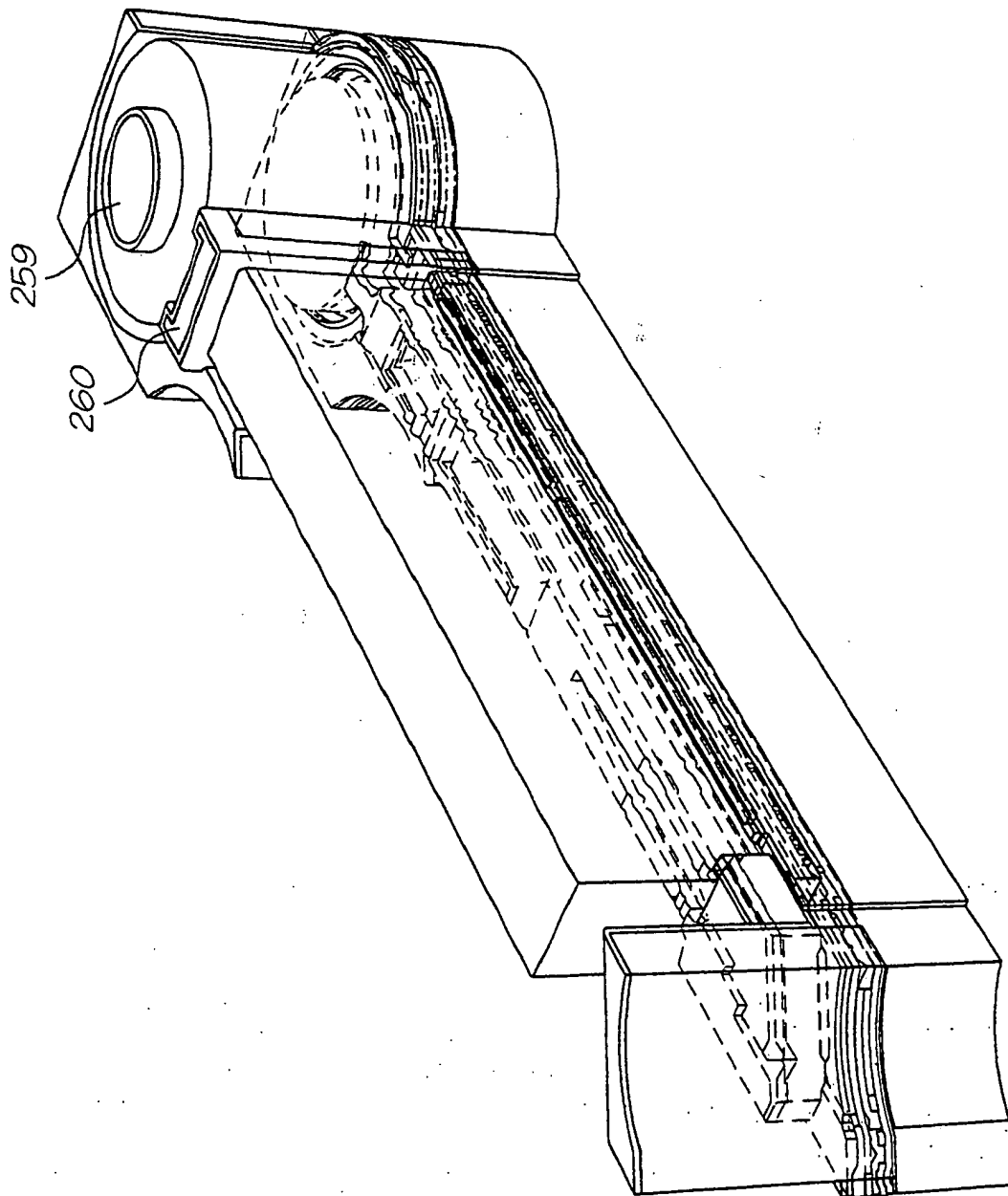
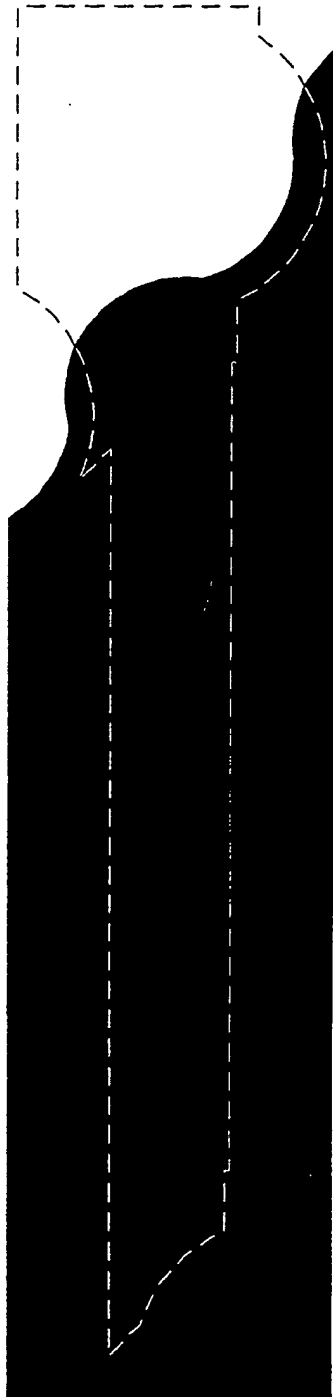


FIG. 68

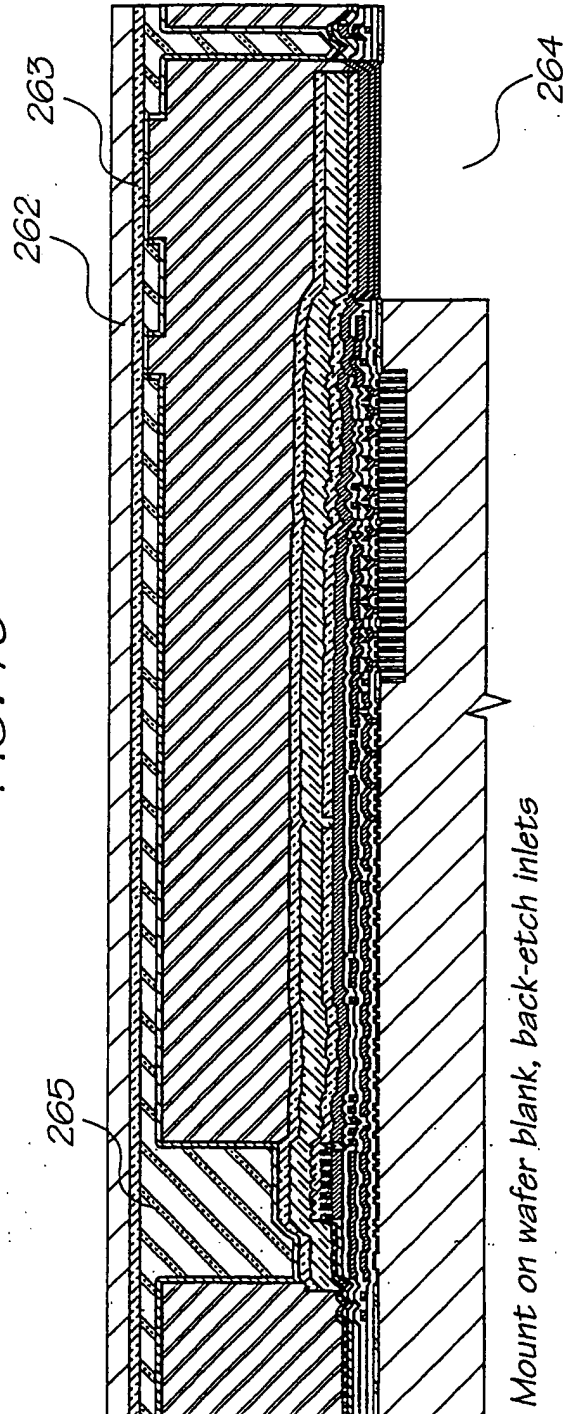
FIG. 68

45/81



Back-etch inlet mask

FIG. 70



Mount on wafer blank, back-etch inlets

FIG. 69

46/81

FIG. 70

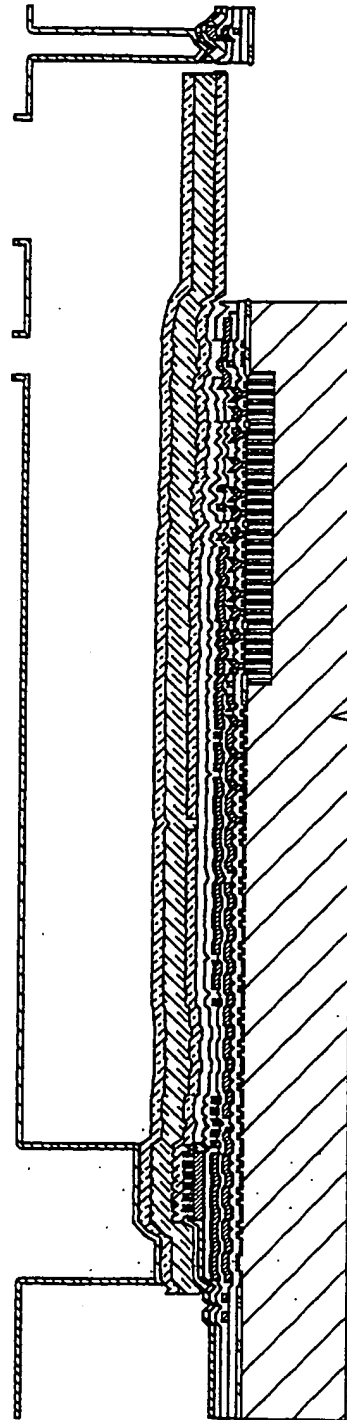
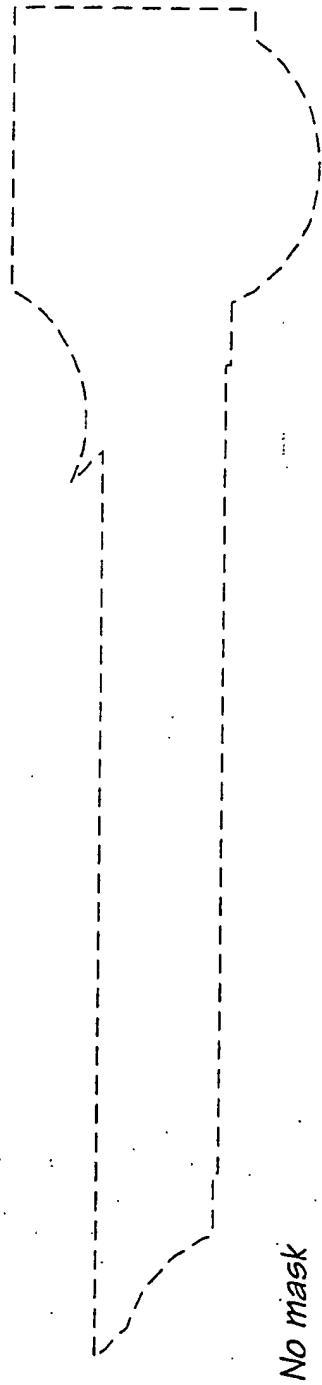


FIG. 71

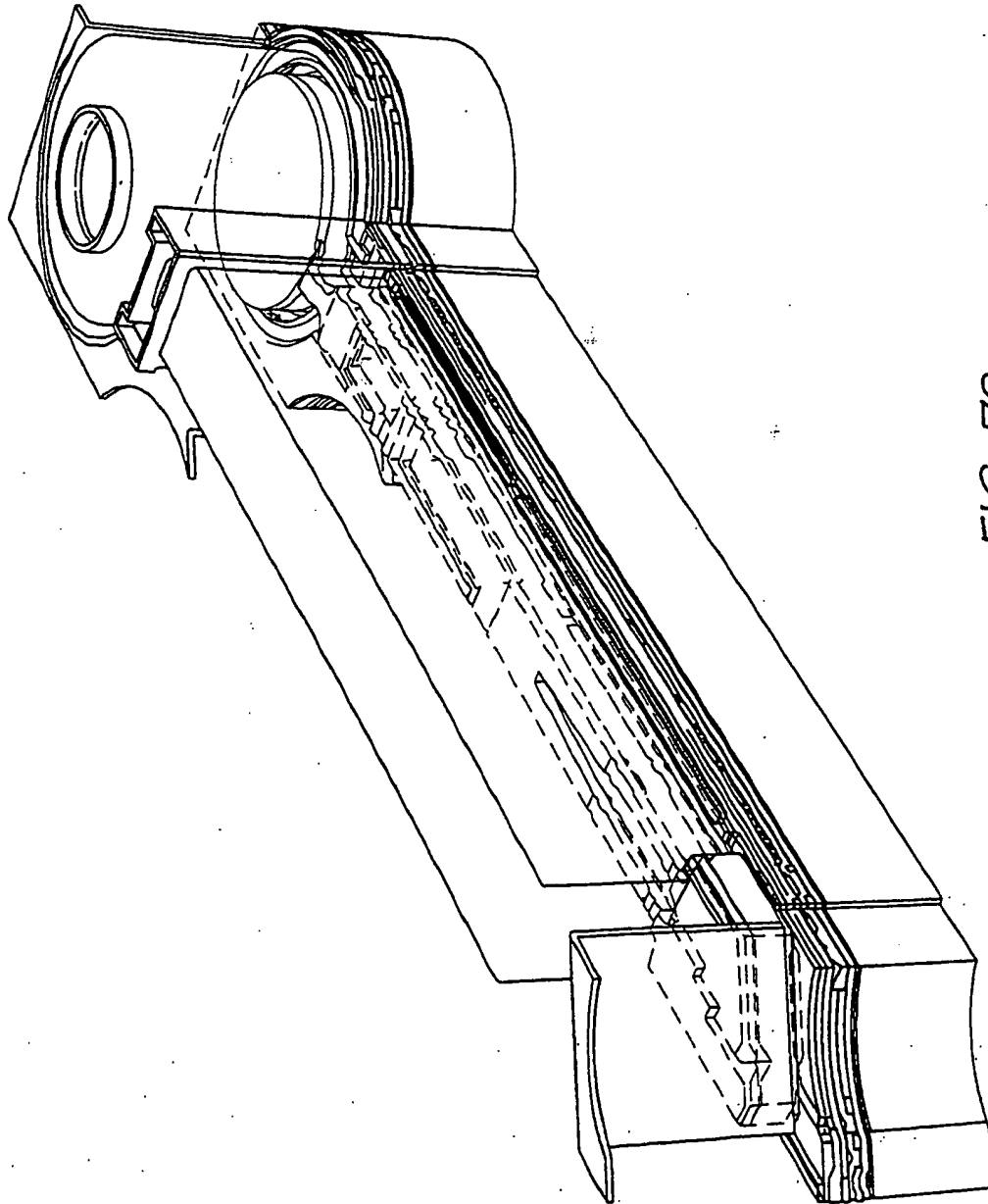


FIG. 72

FIG. 72

48/81

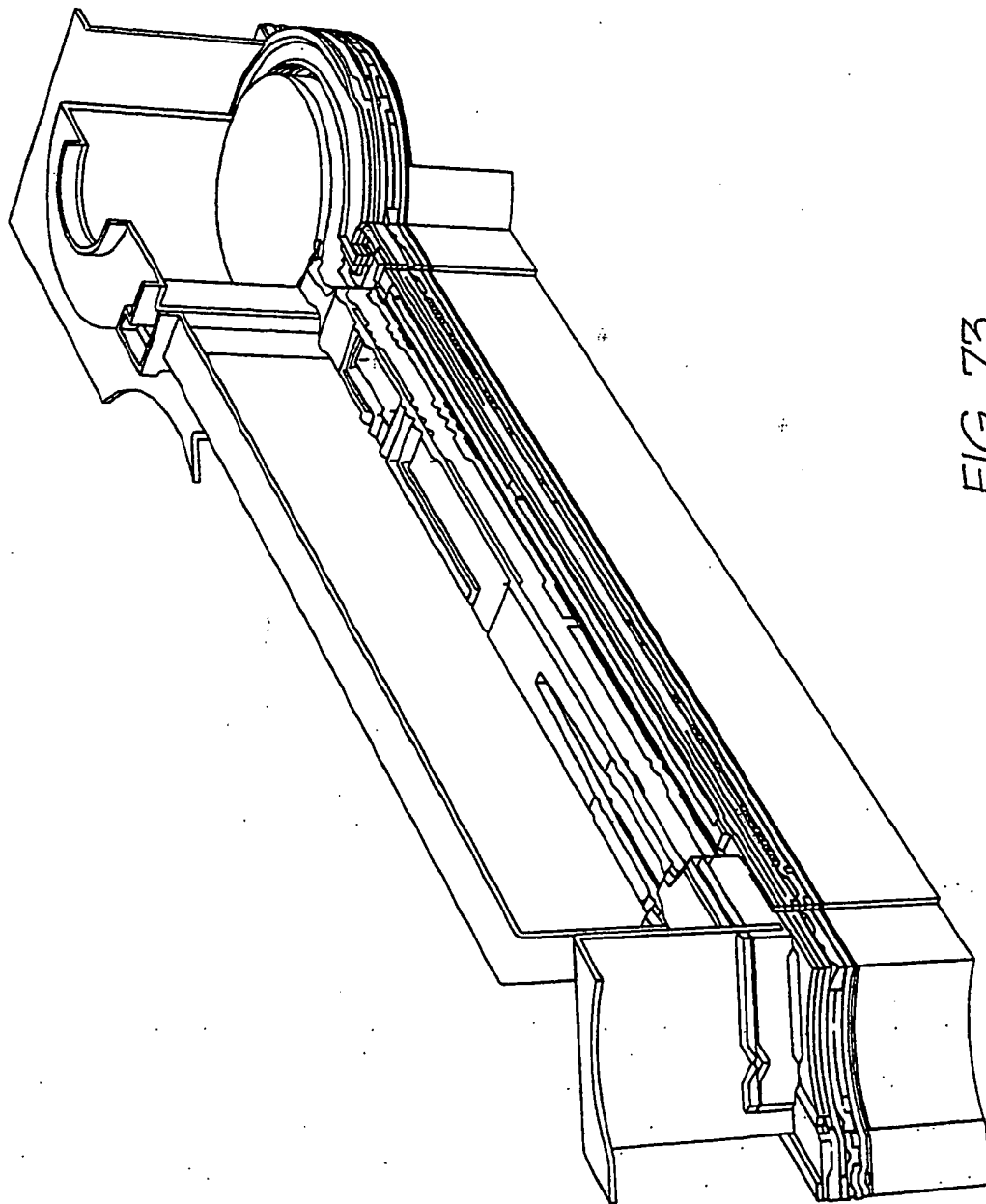
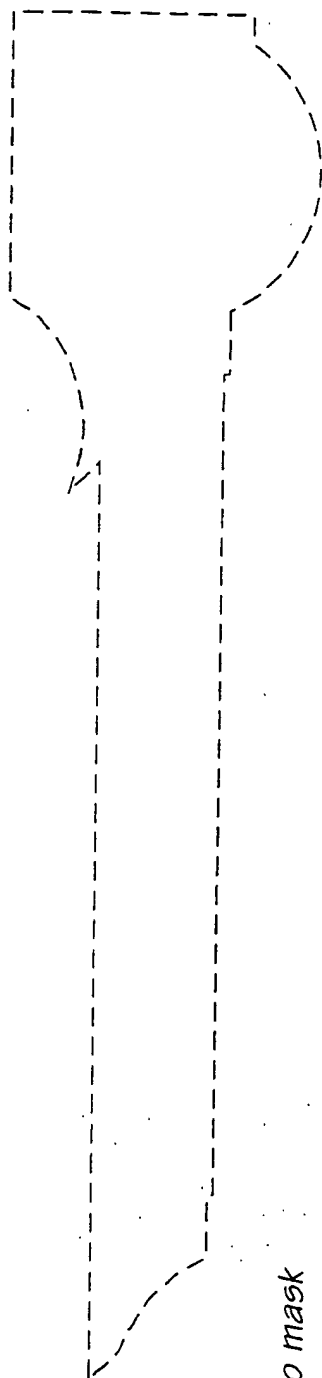


FIG. 73

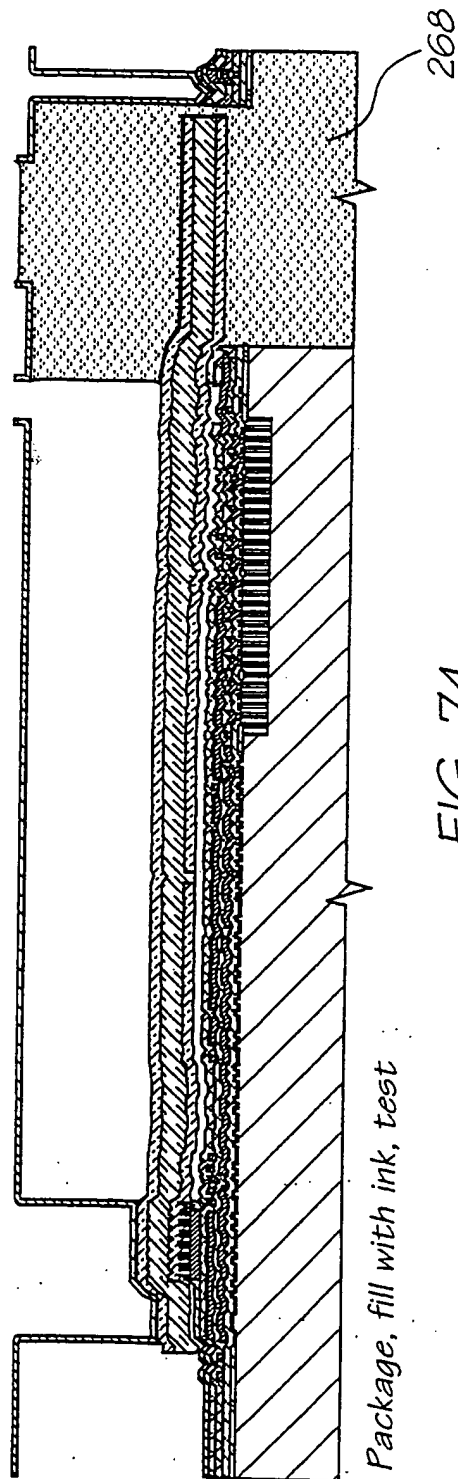
FIG. 73

49/81

FIG. 73



No mask



Package, fill with ink, test

FIG. 74

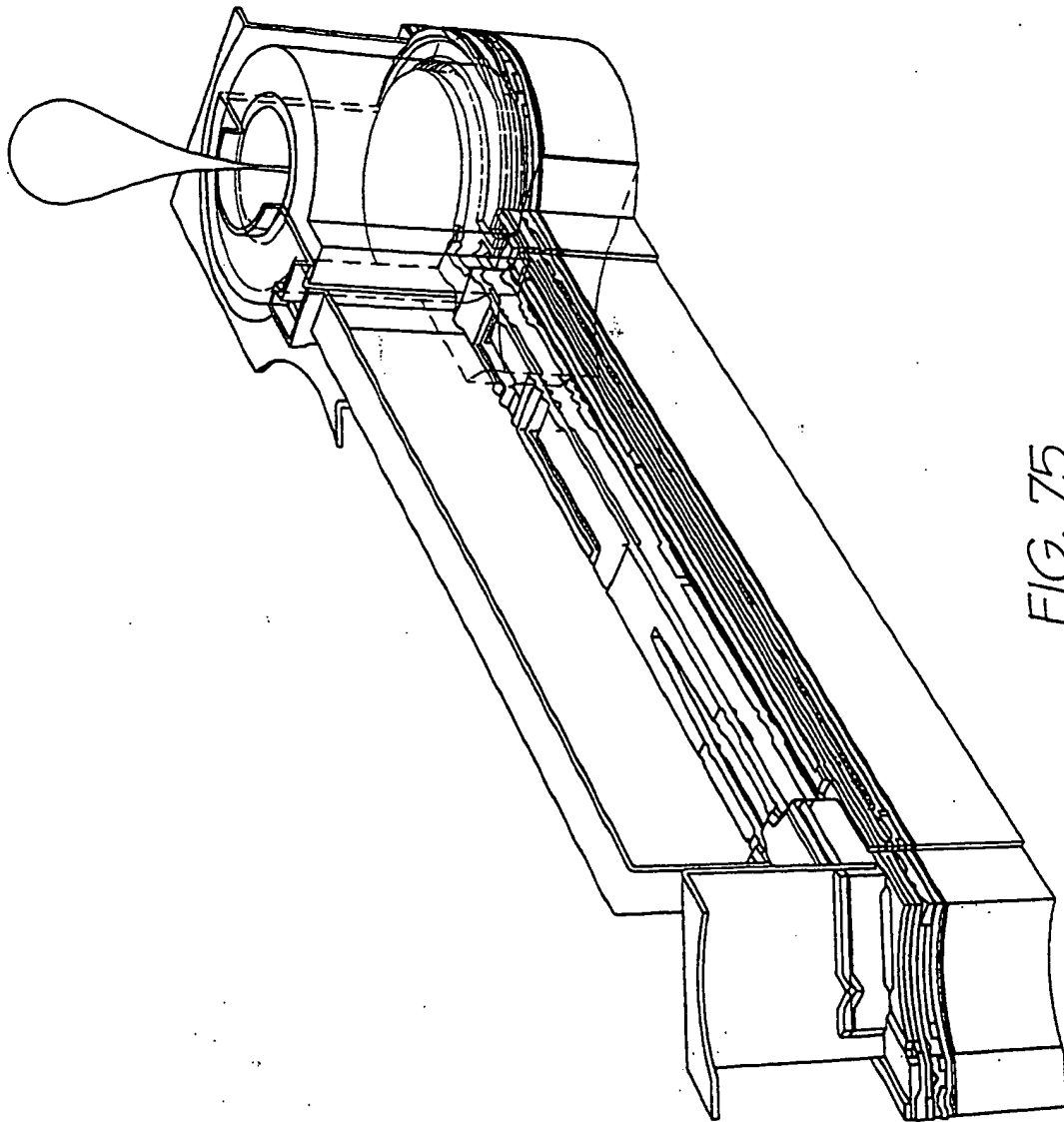


FIG. 75

FIG. 75

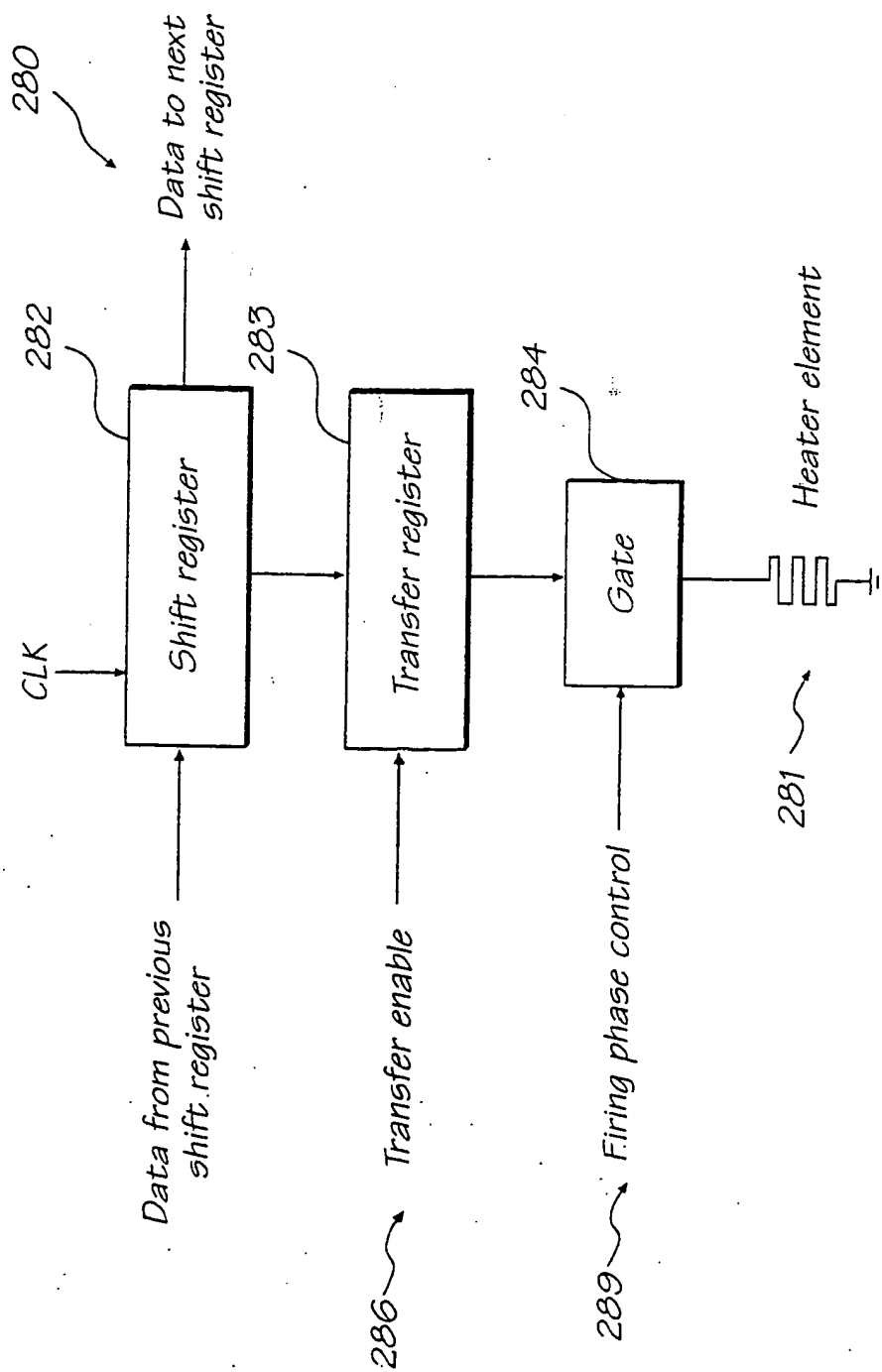


FIG. 76

FIG. 77

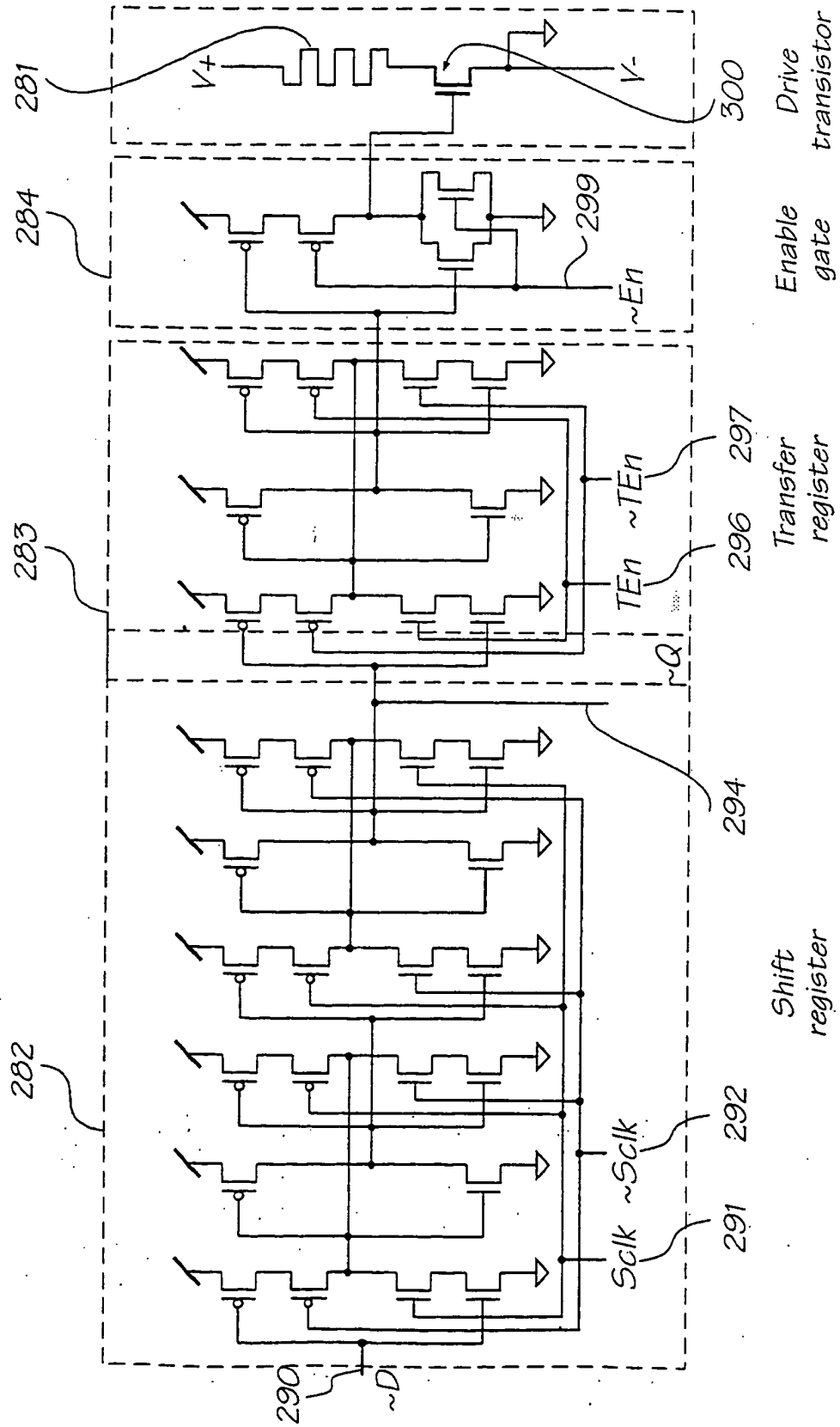


FIG. 77

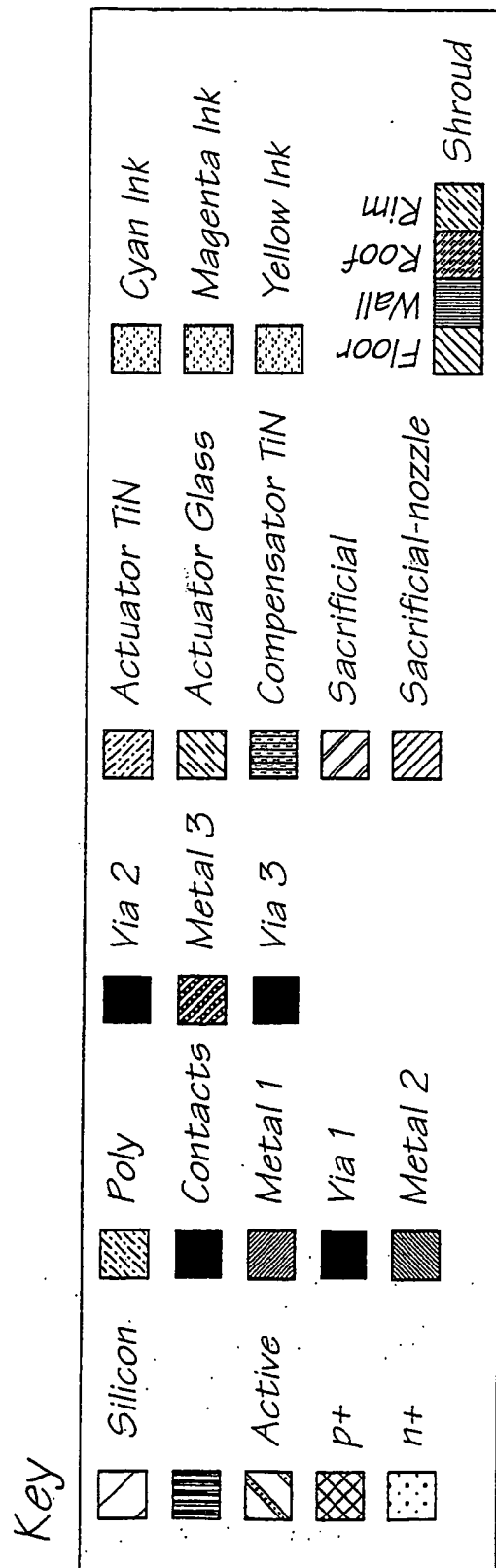


FIG. 78

54/81

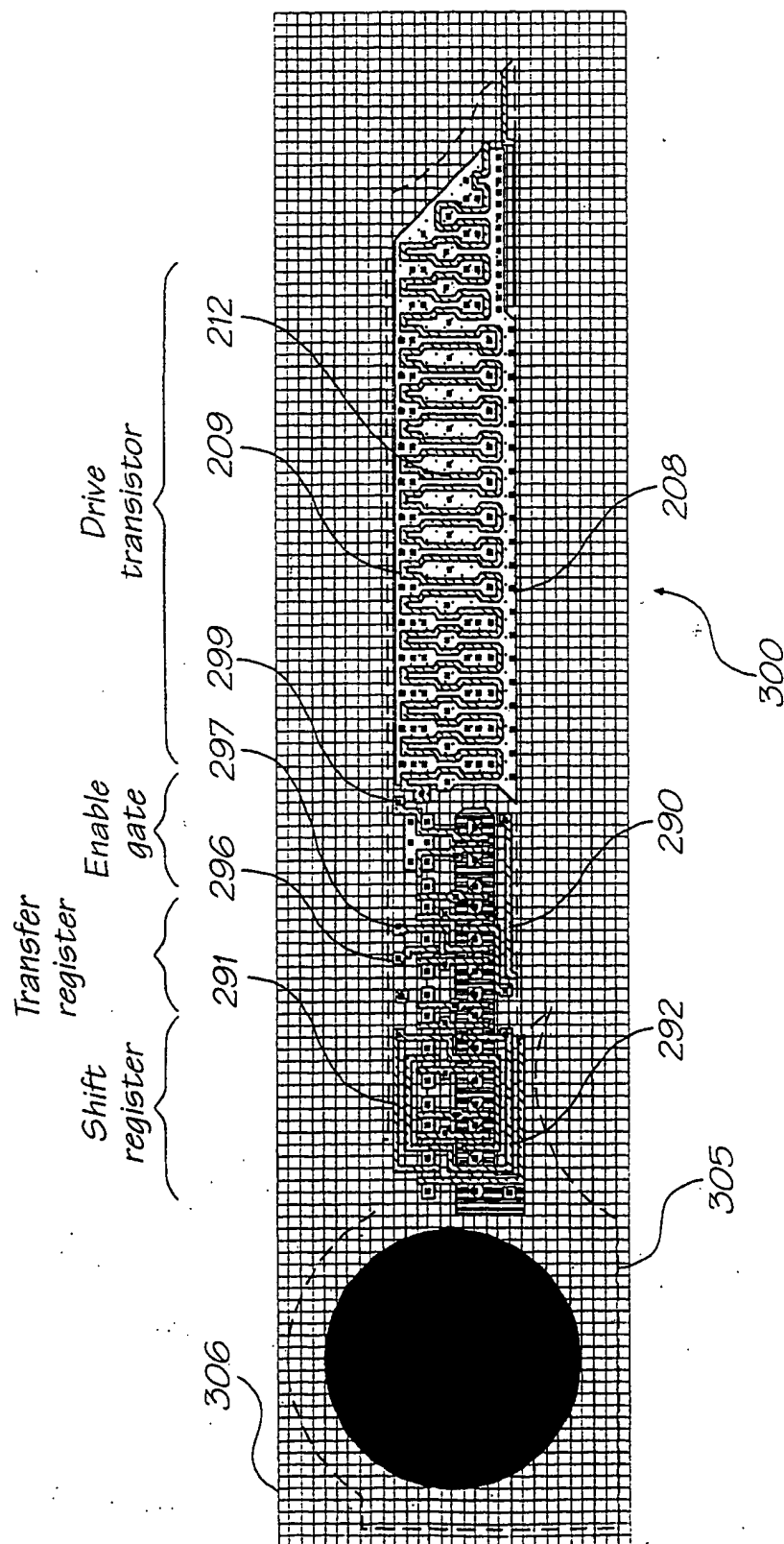


FIG. 79

55/81

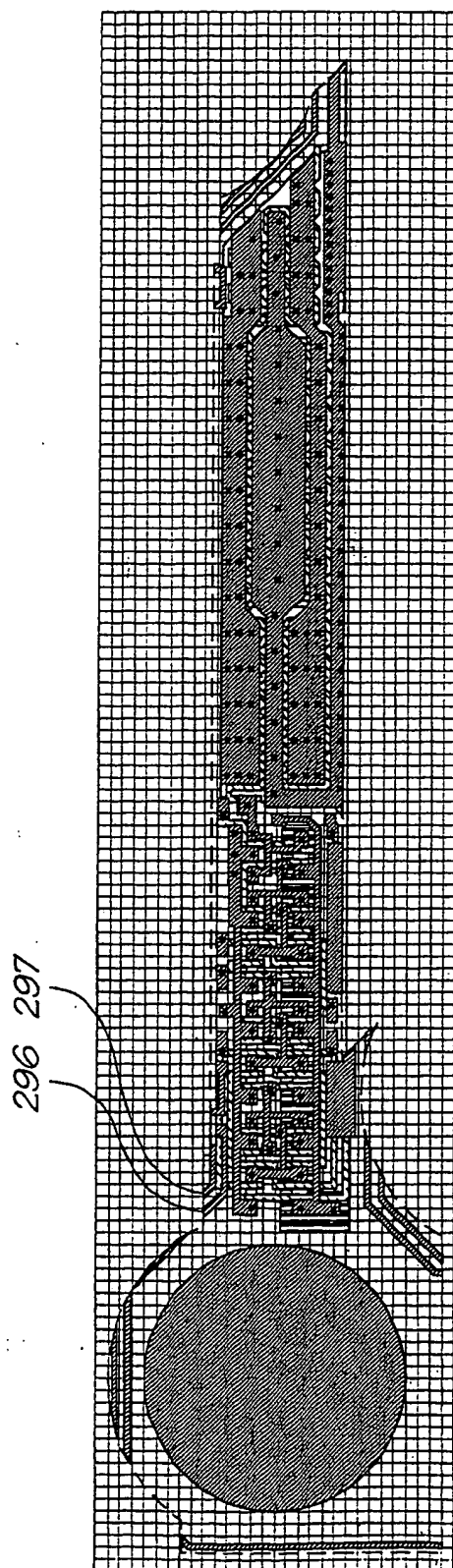


FIG. 80

56/81

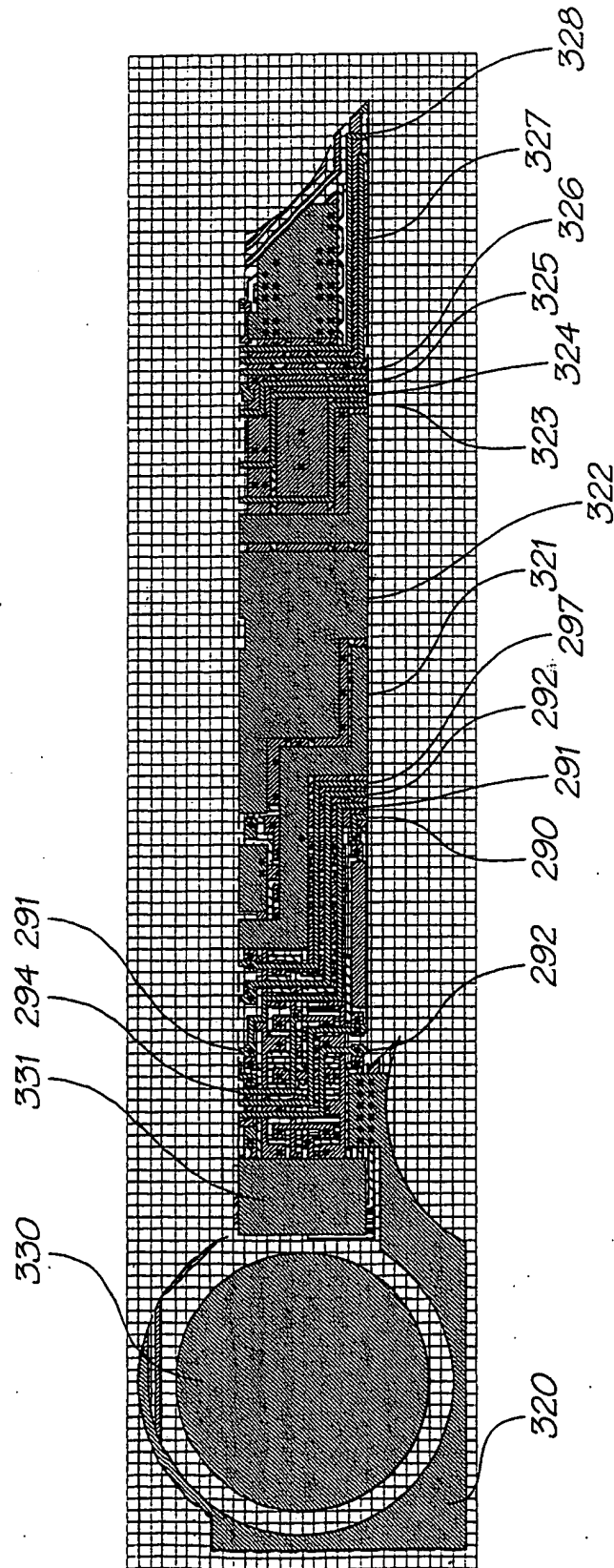


FIG. 81

57/81

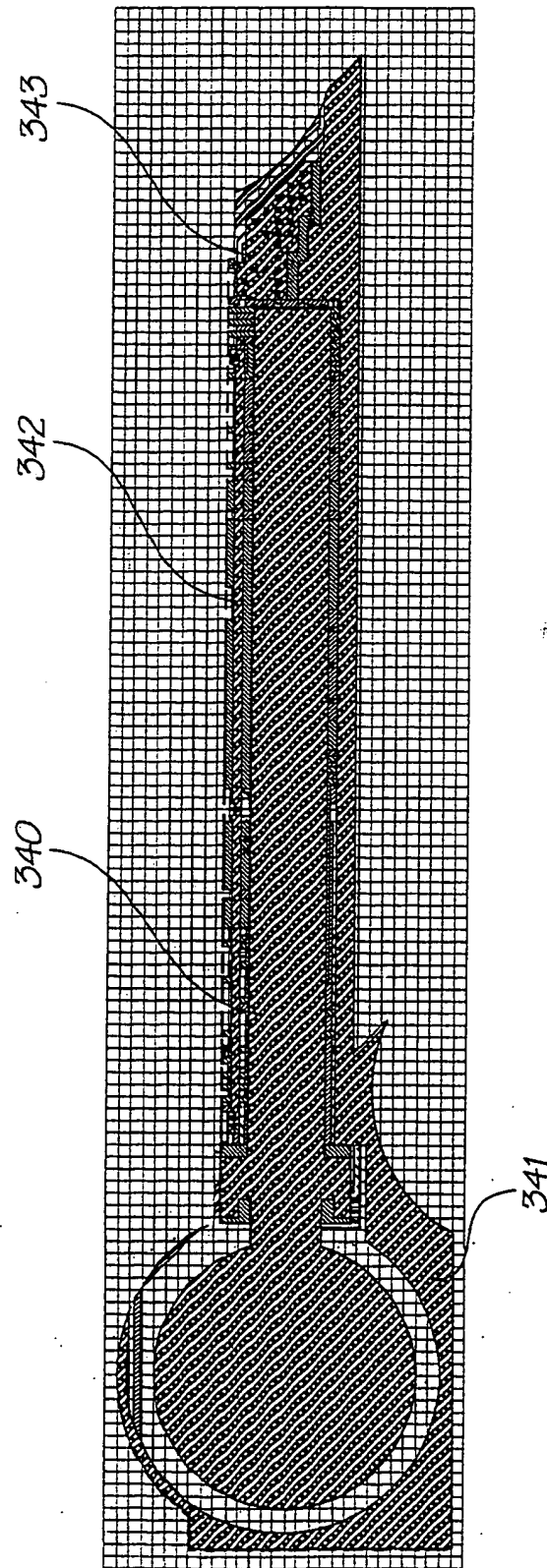


FIG. 82

58/81

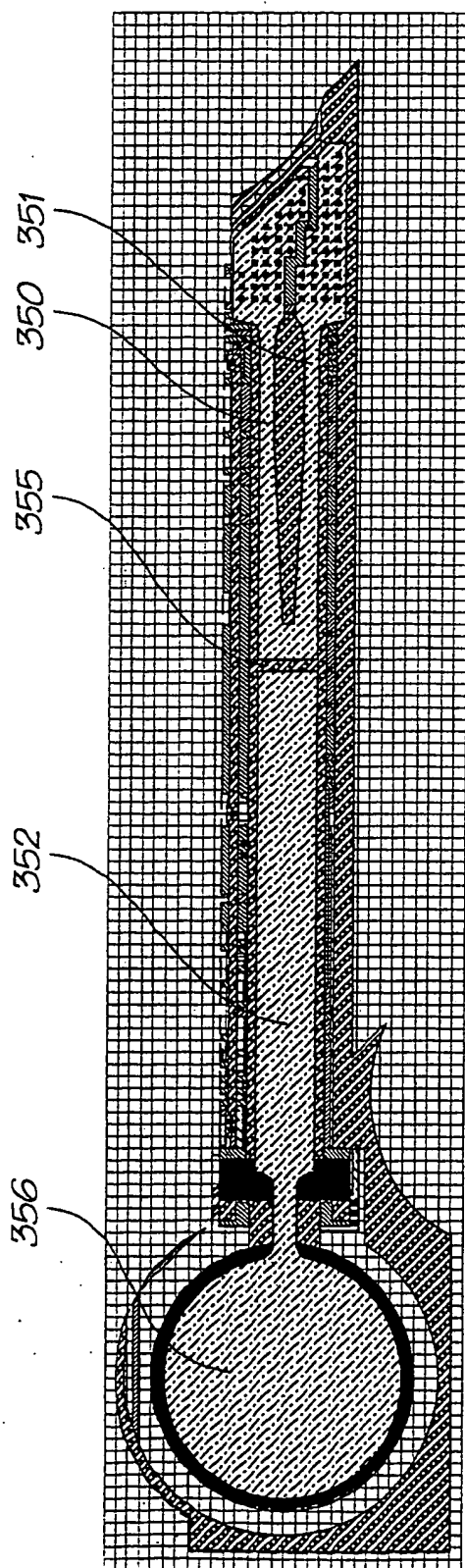


FIG. 83

FIG. 83

59/81

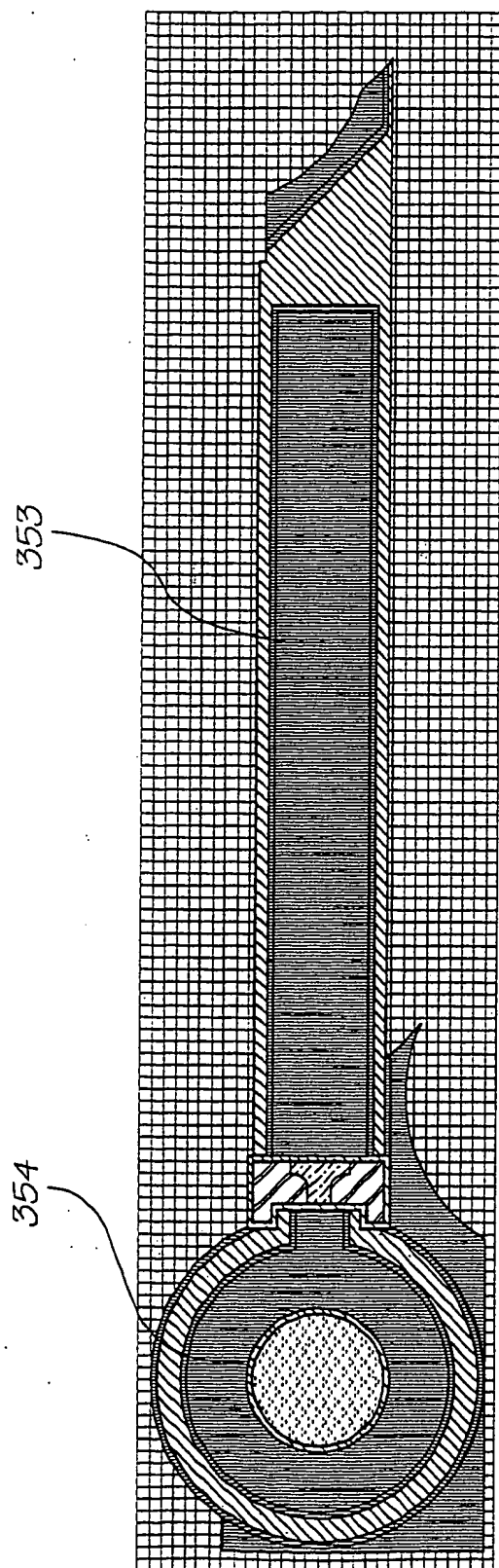


FIG. 84

FIG. 84

60/81

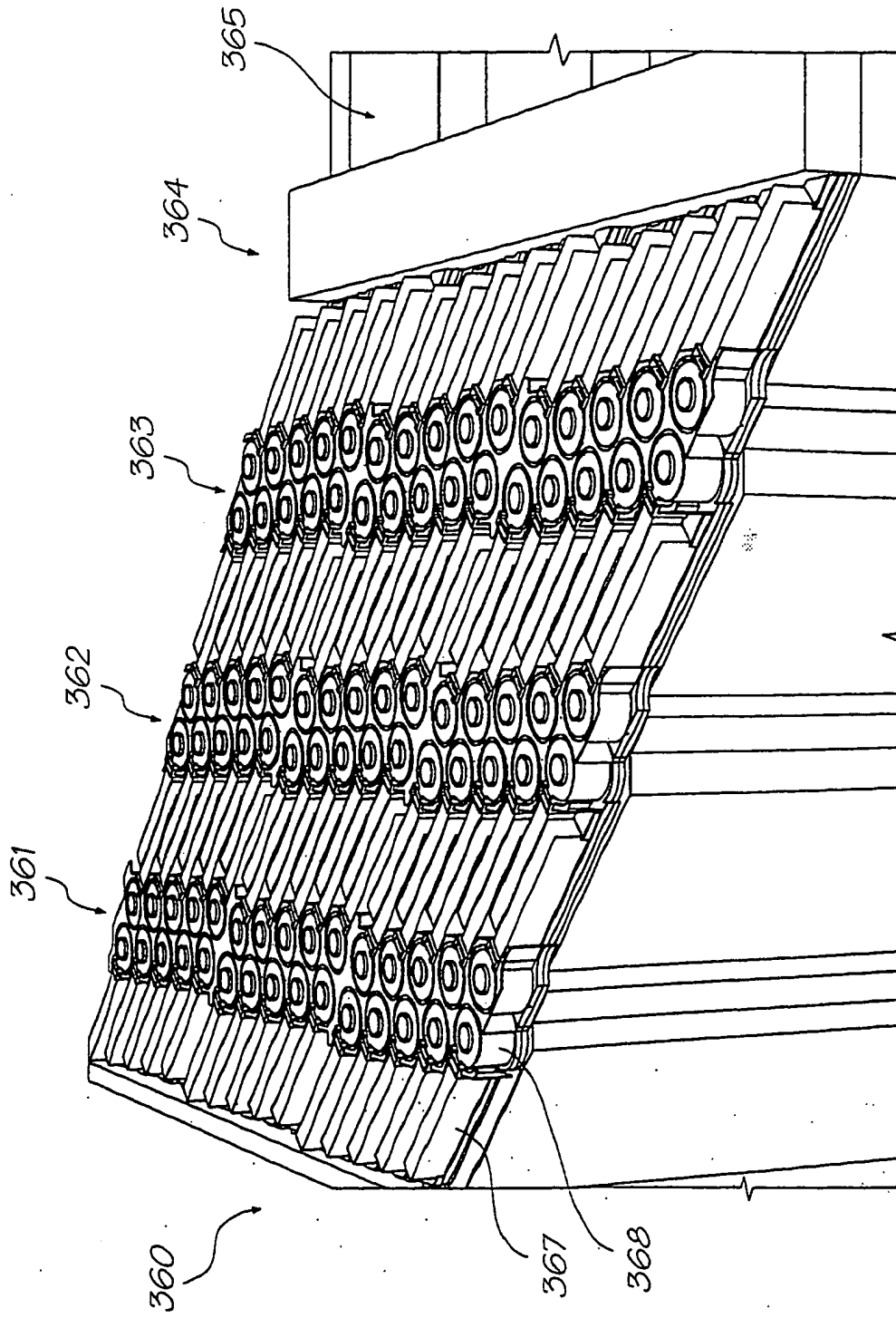


FIG. 85

61/81

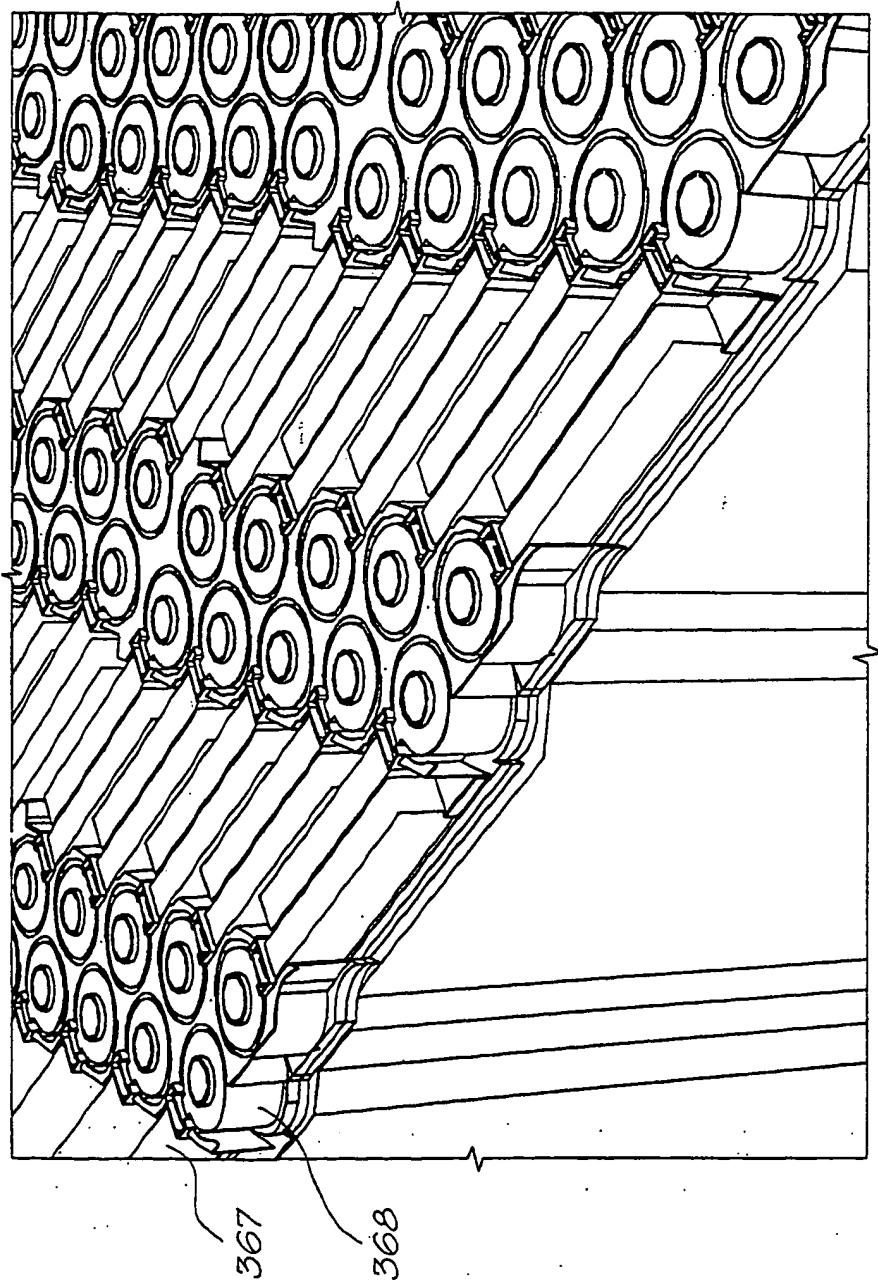


FIG. 86

62/81

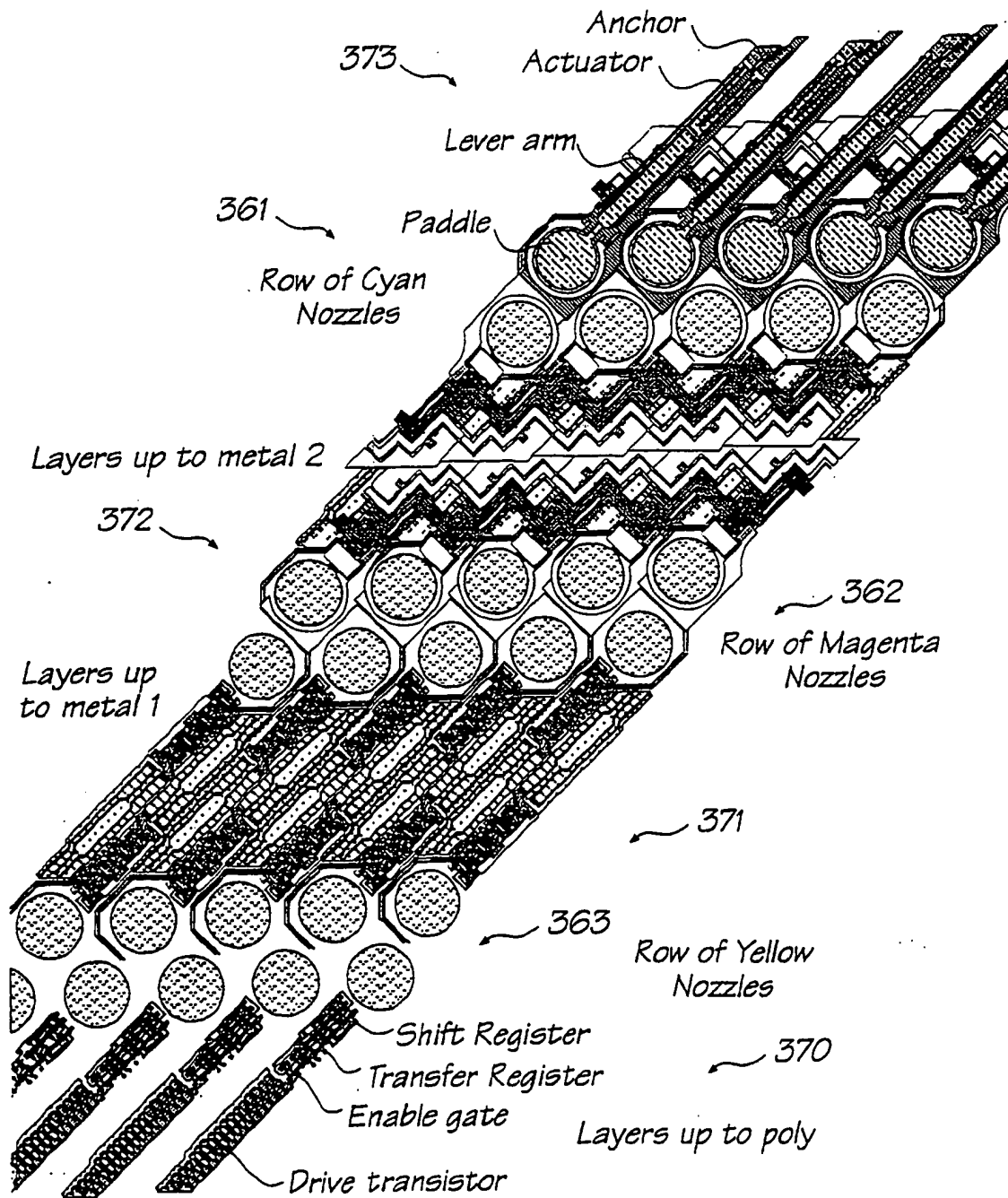


FIG. 87

63/81

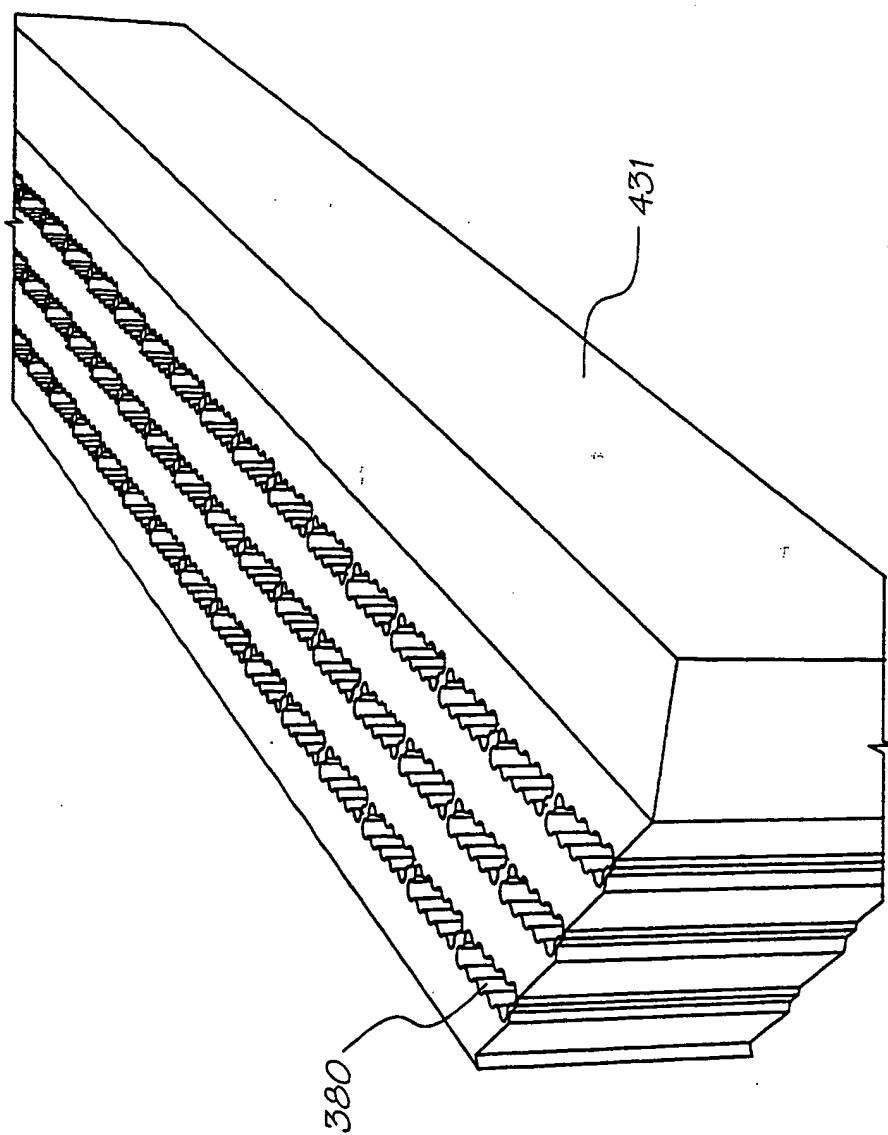


FIG. 88

FIG. 88

64/81

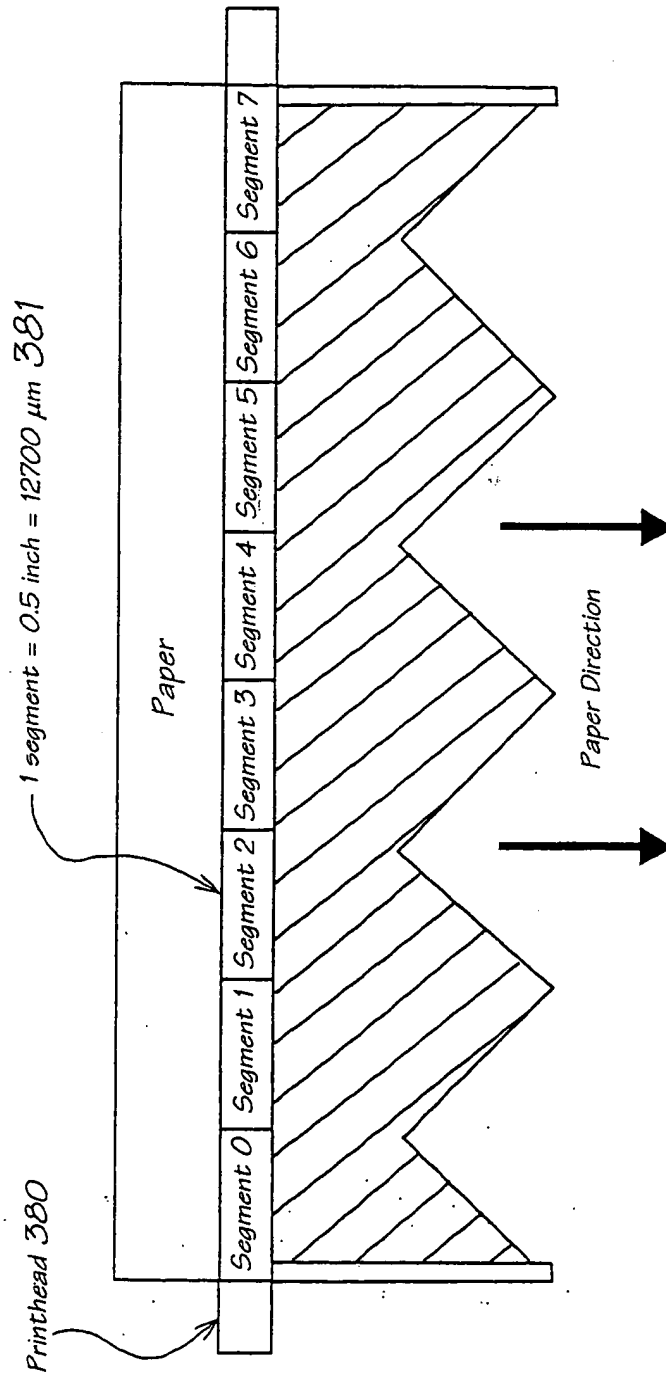
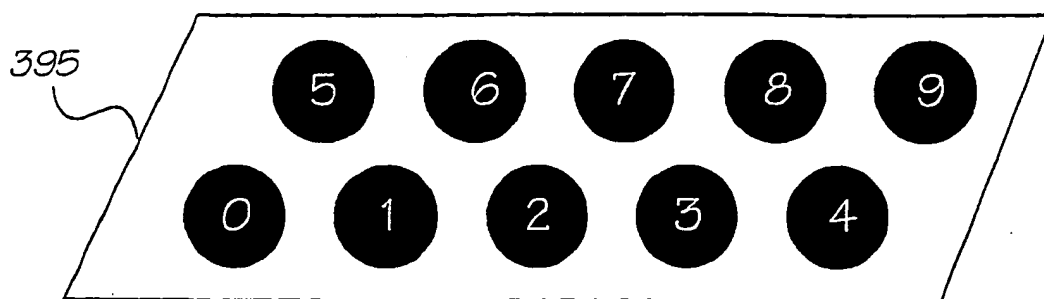


FIG. 89

65/81



A single pod, numbered by firing order

Fig. 90

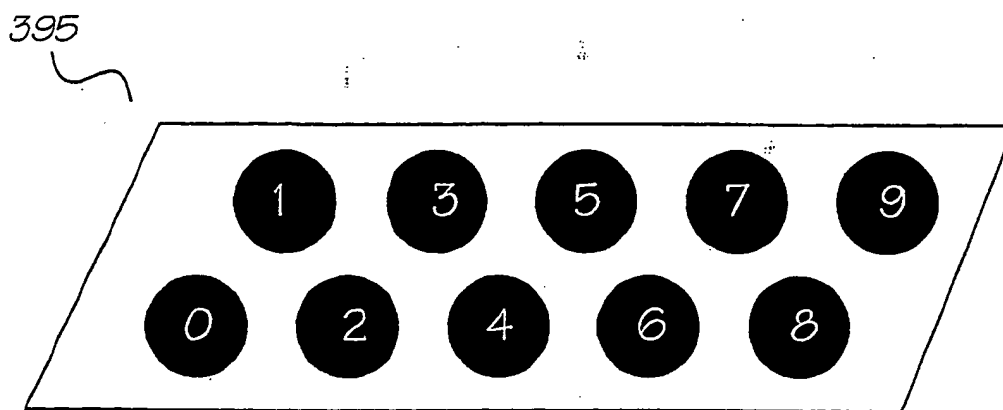


Fig. 91

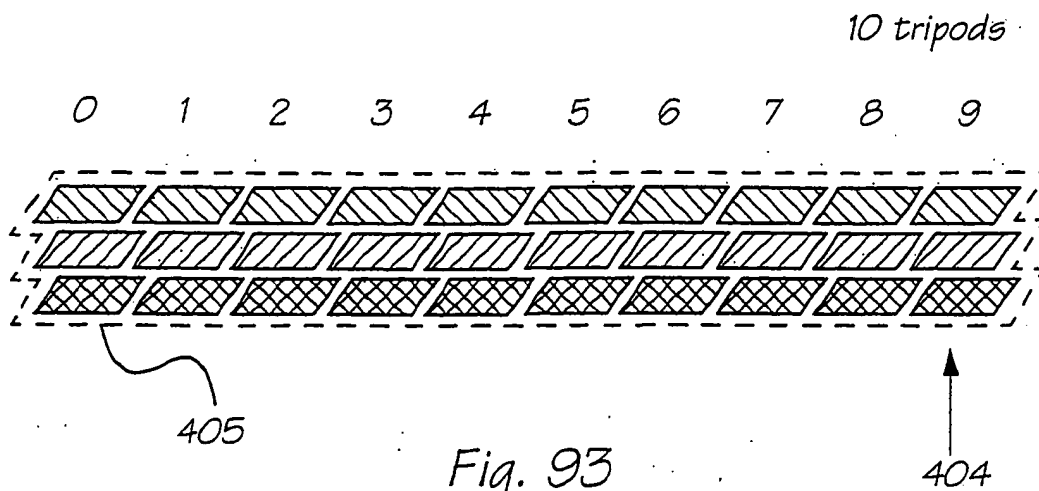


Fig. 93

FIG. 90

FIG. 92

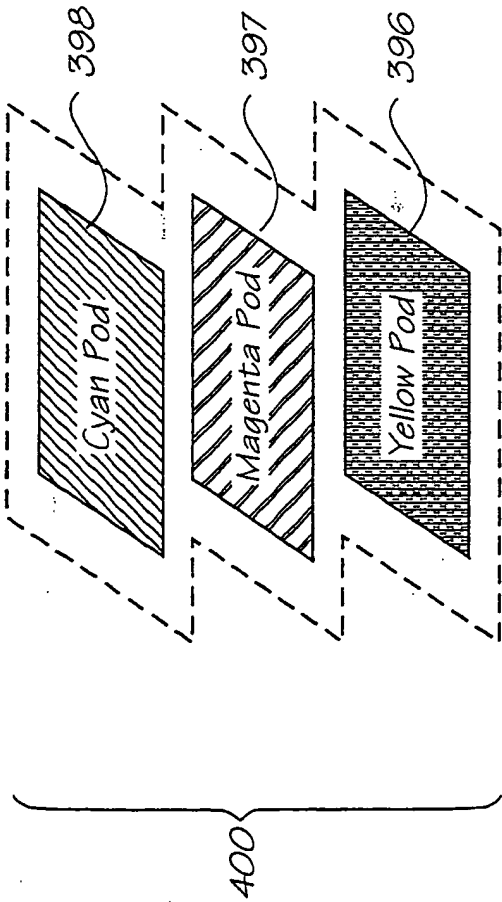


FIG. 92

67/81

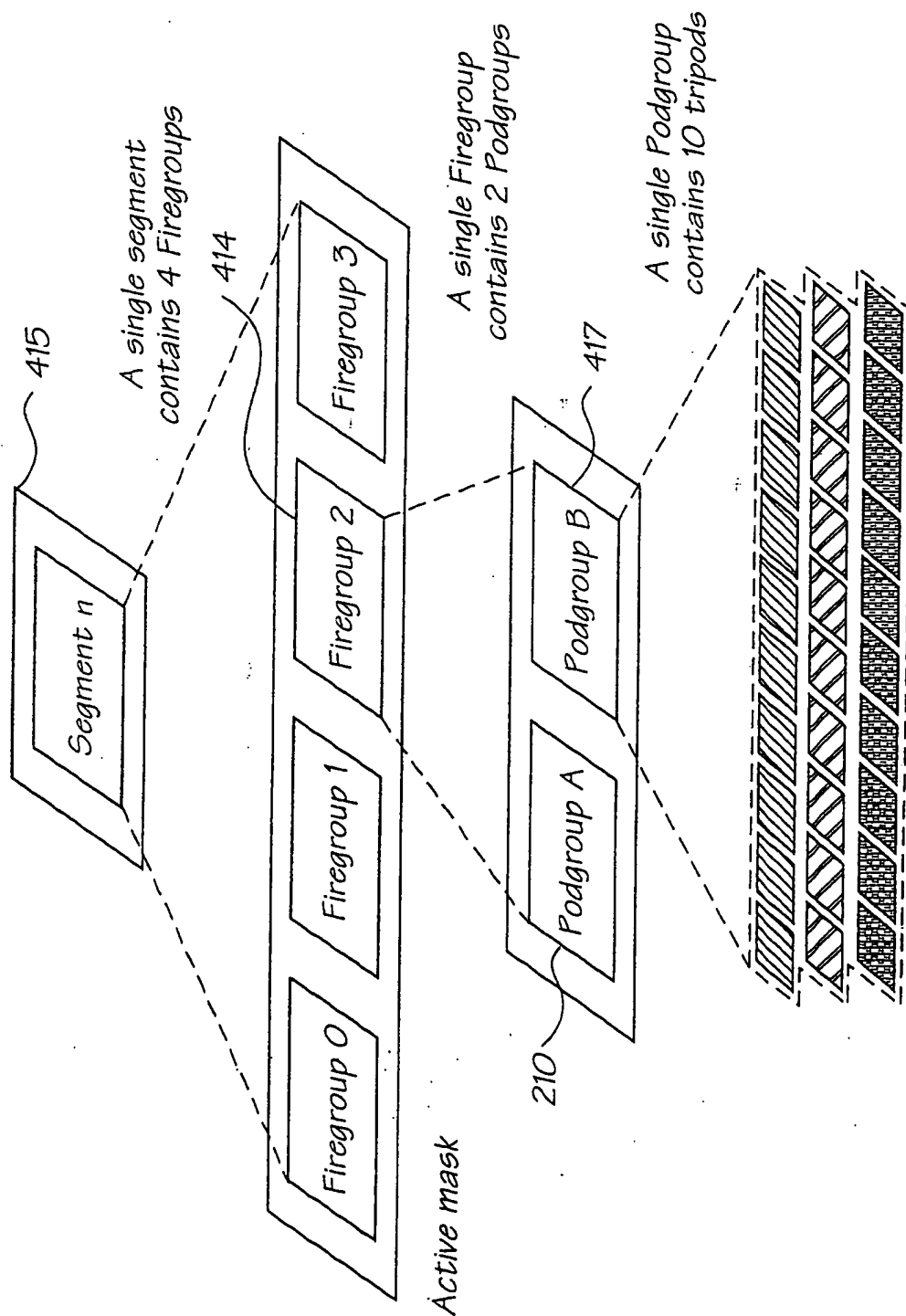


FIG. 94

68/81

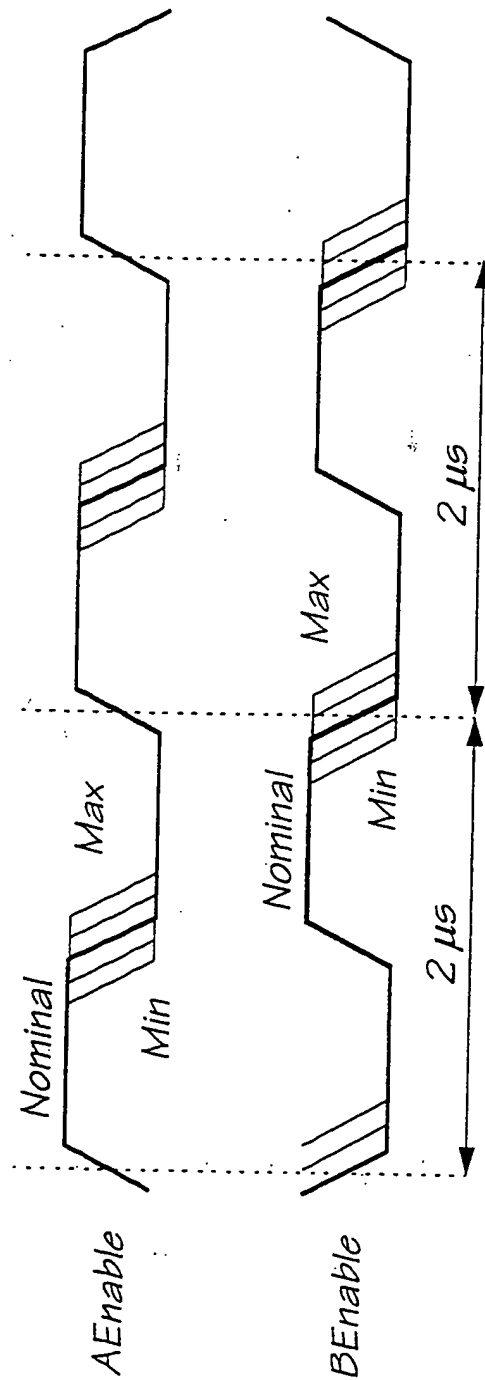


FIG. 95

69/81

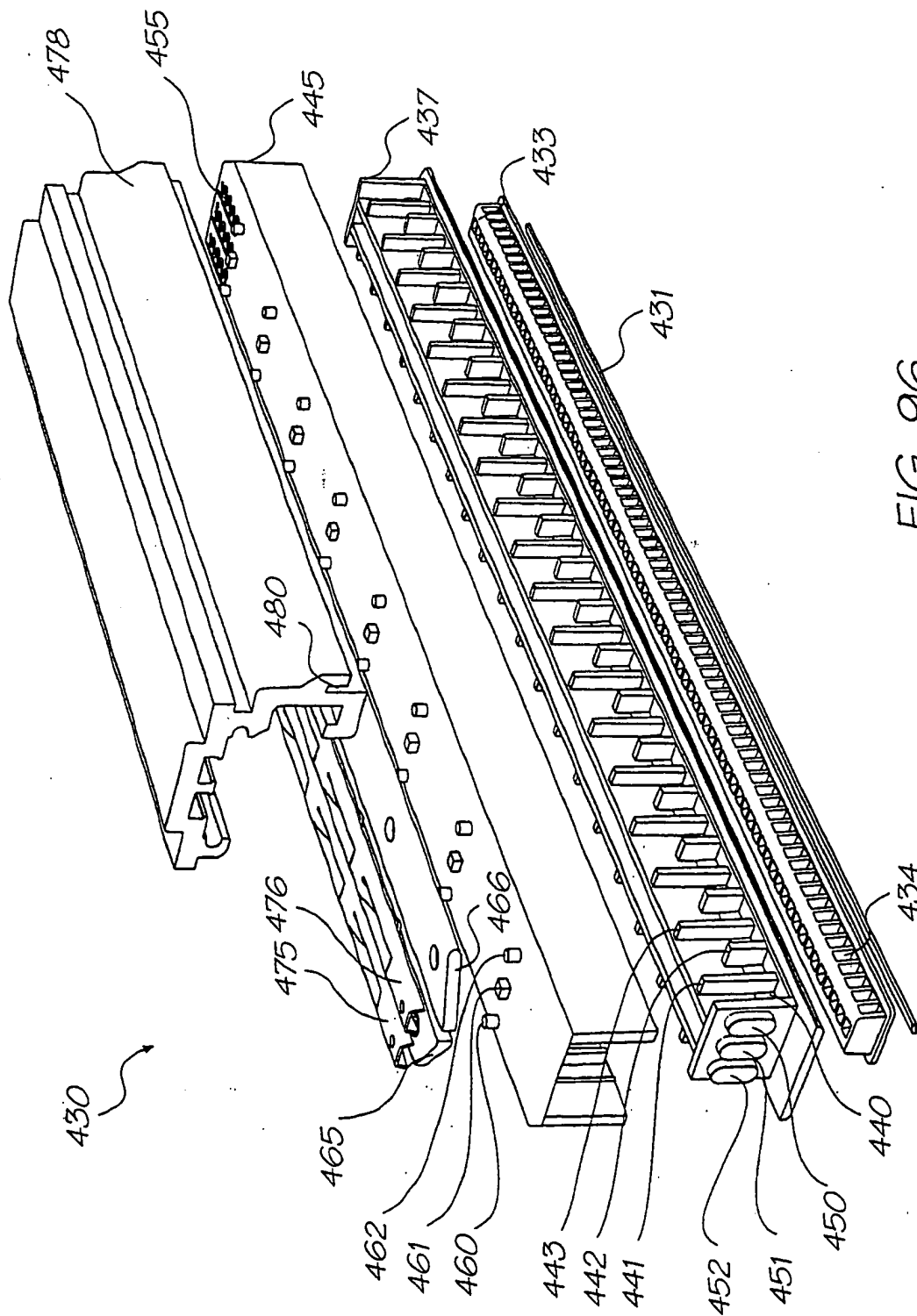


FIG. 96

70/81

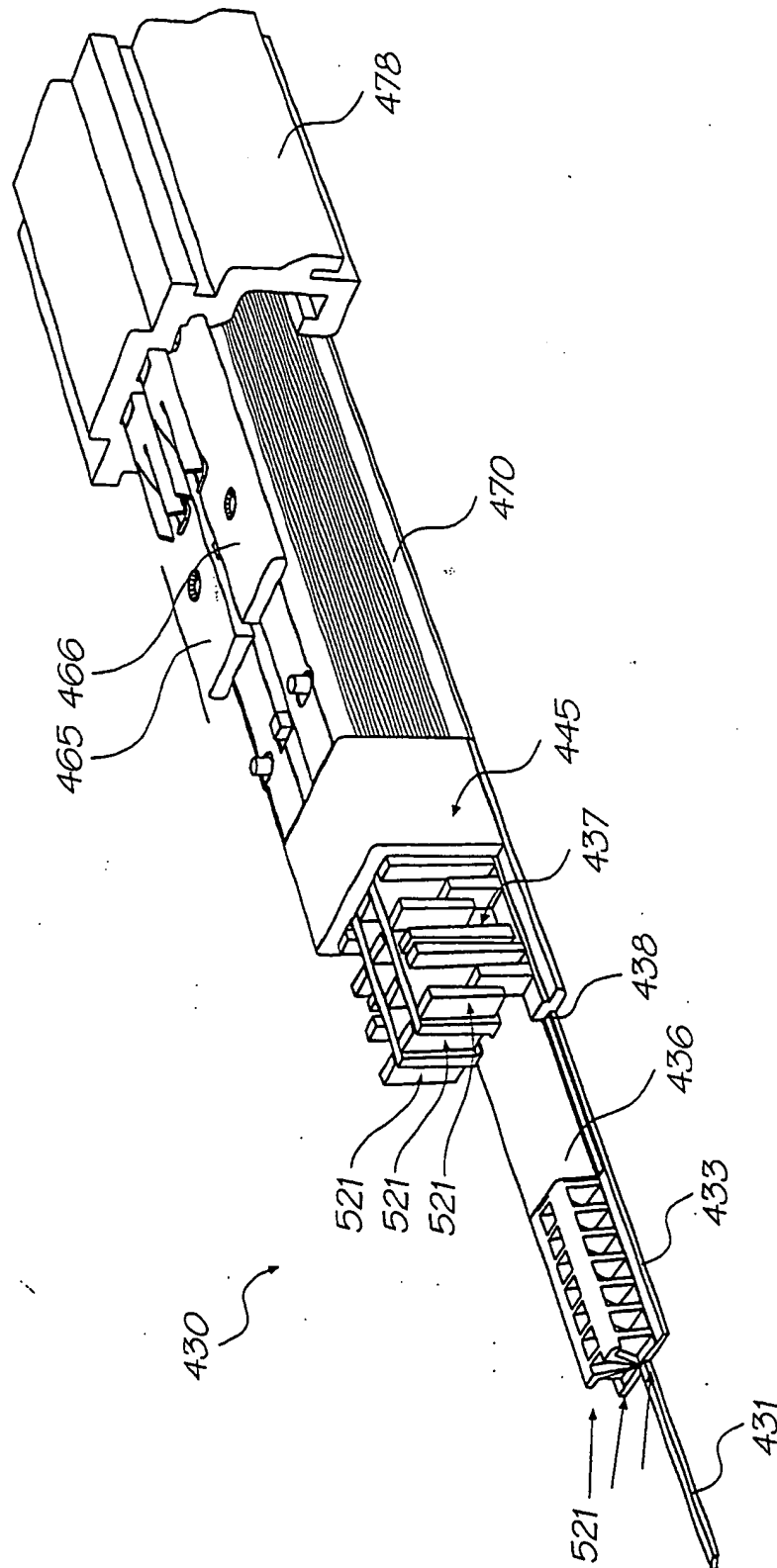


FIG. 97

71/81

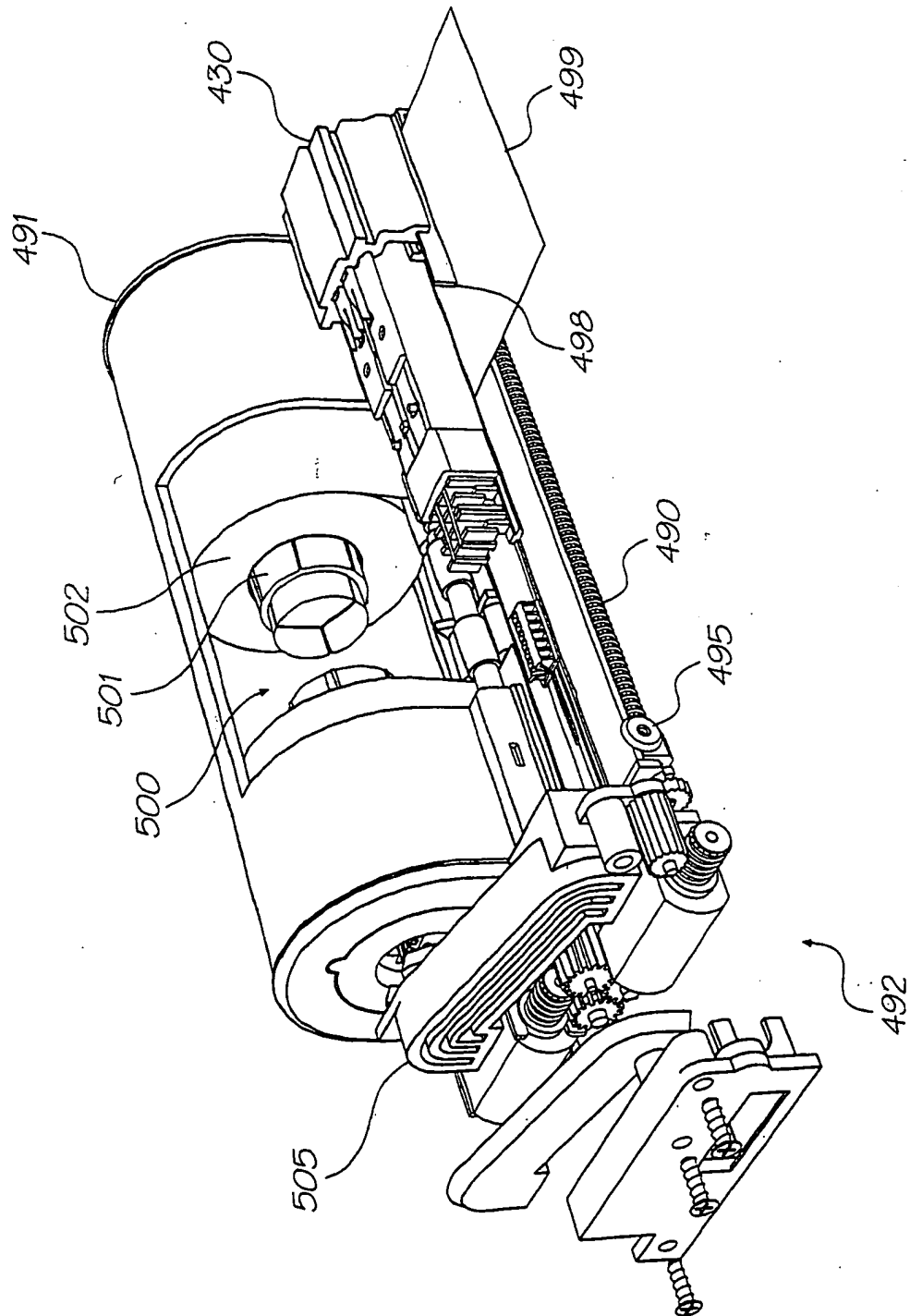


FIG. 98

FIG. 98 is a perspective view of a mechanical assembly 492.

72/81

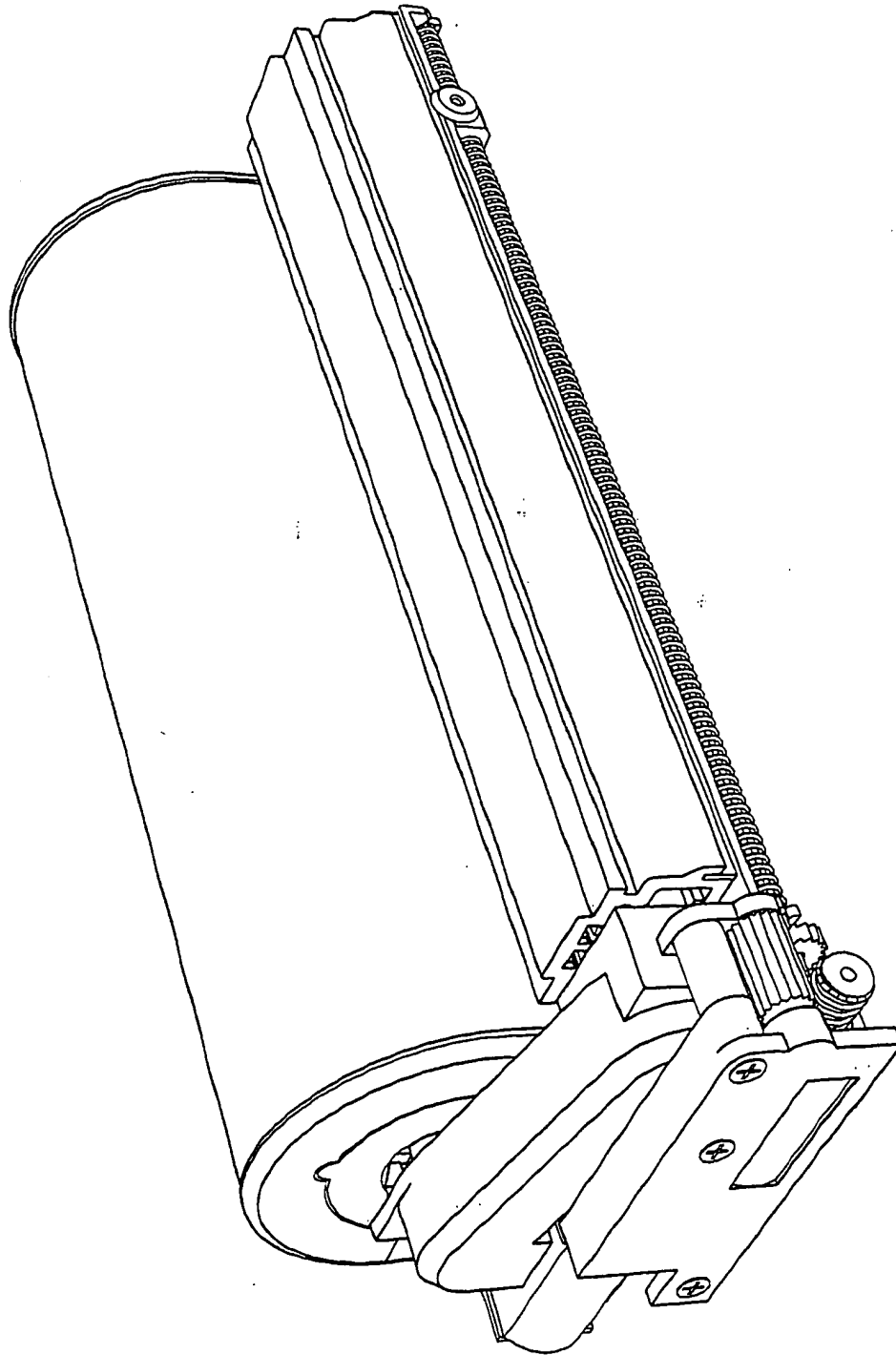


FIG. 99

093371-041001

73/81

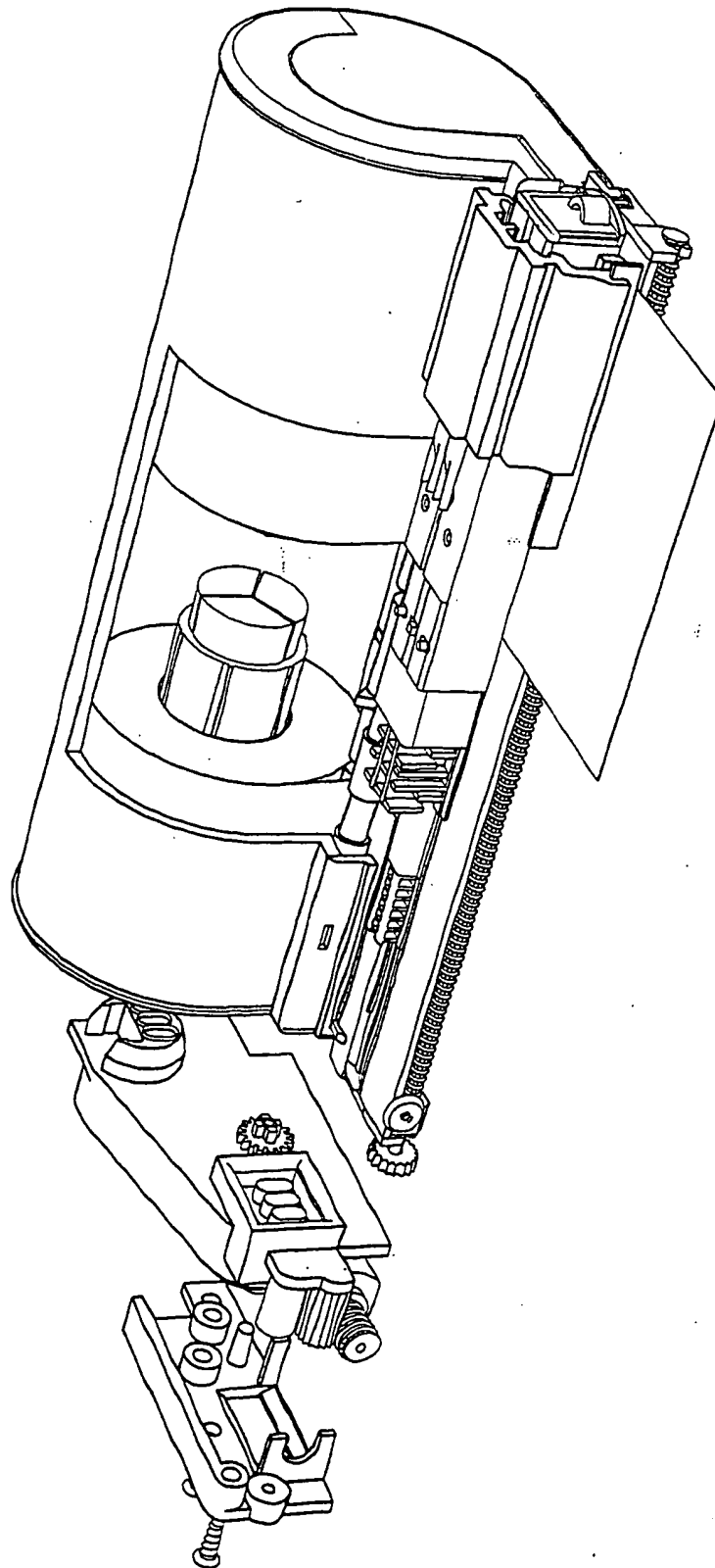


FIG. 100

FIG. 100

74/81

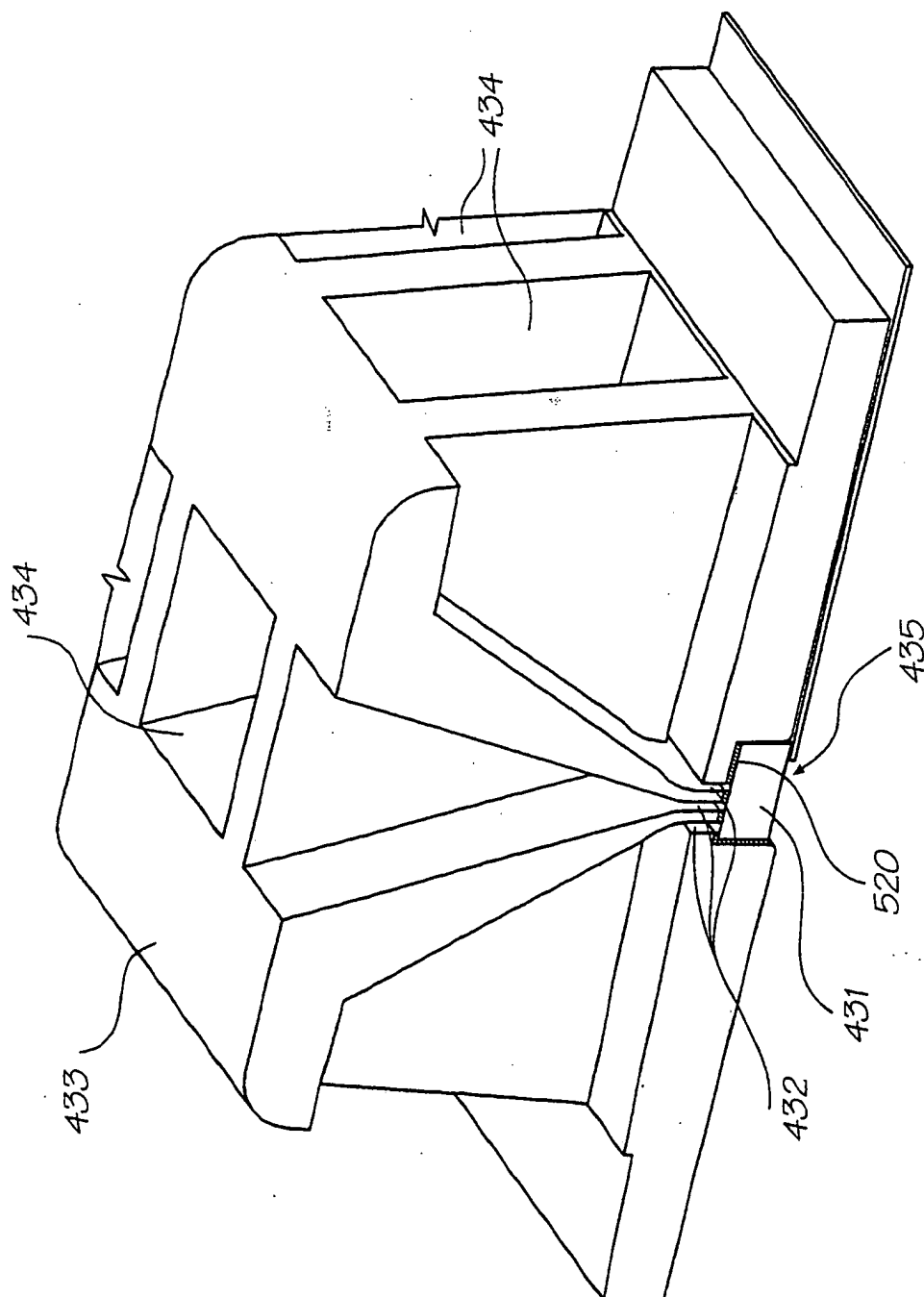


FIG. 101

FIG. 101

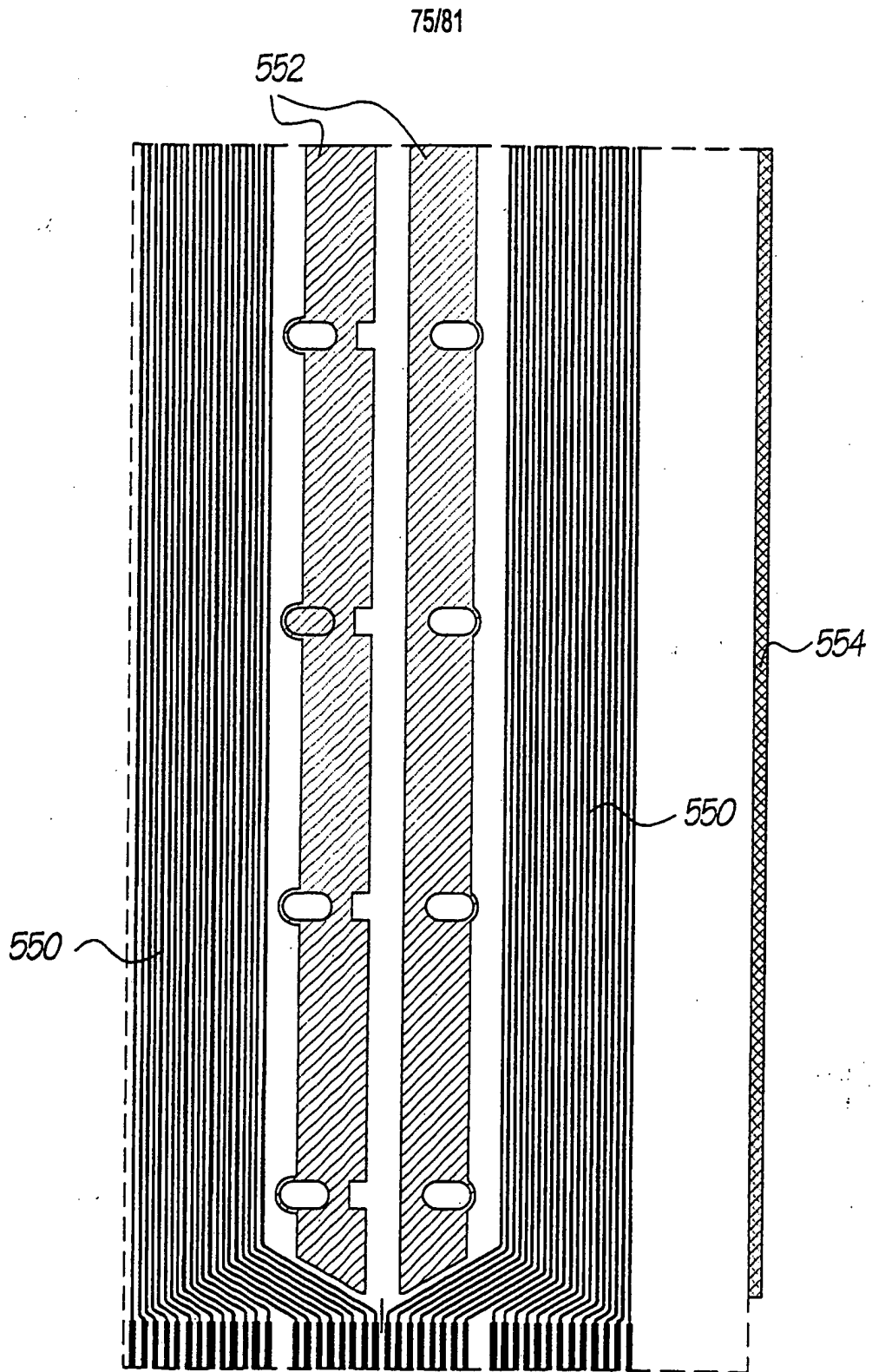


FIG. 102

FIG. 103

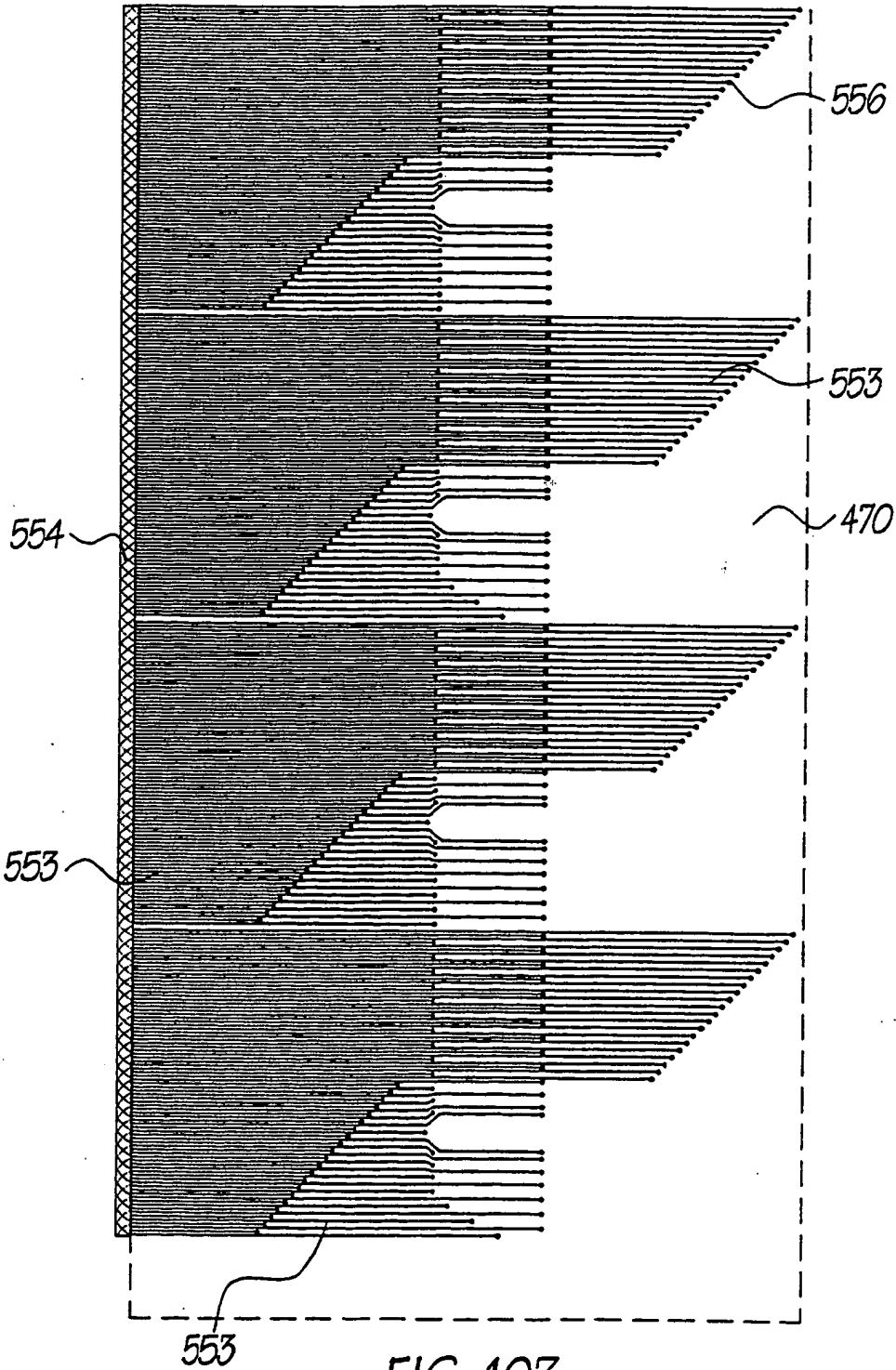


FIG. 103

77/81

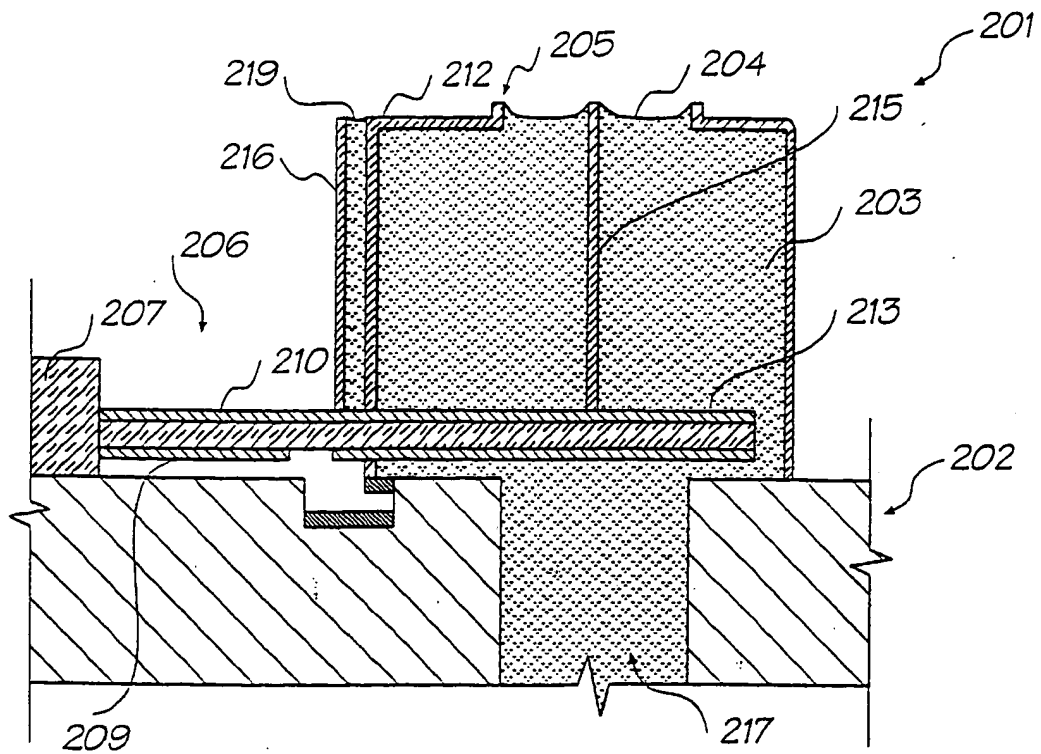


FIG. 104

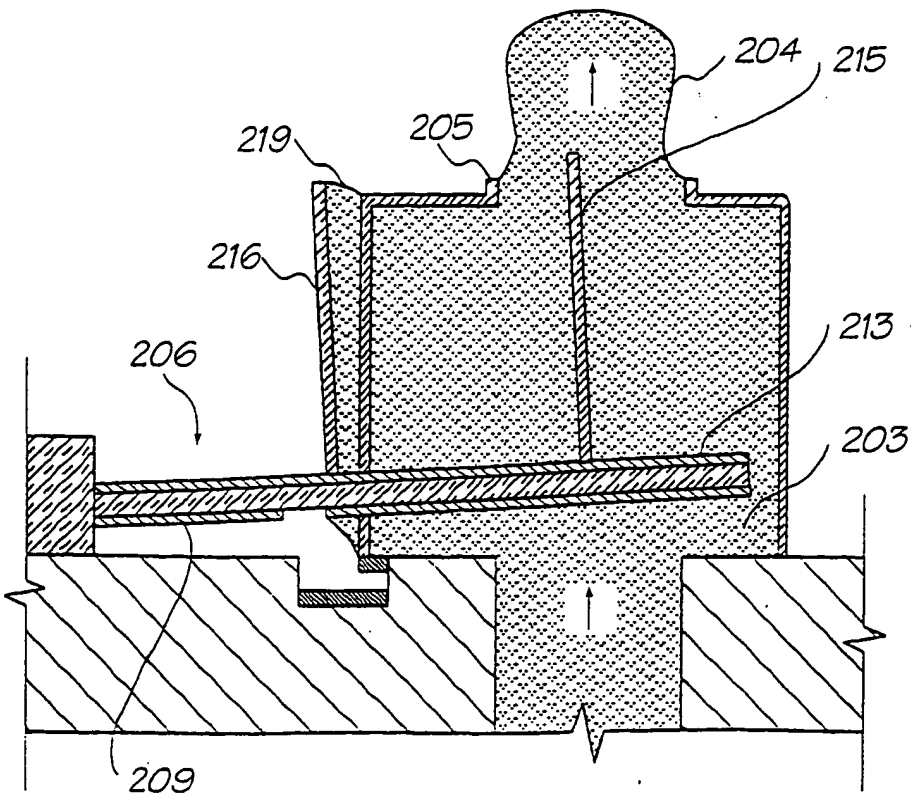


FIG. 105

FIG. 104

78/81

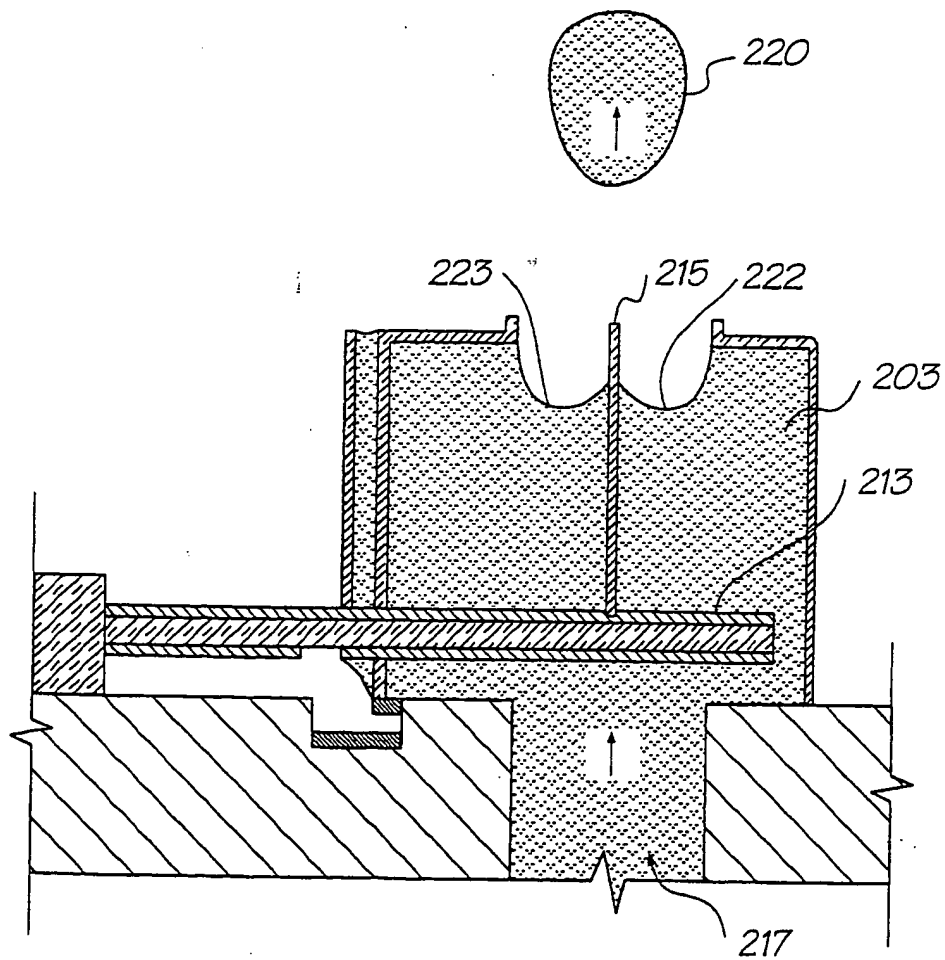


FIG. 106

09635711-041601

79/81

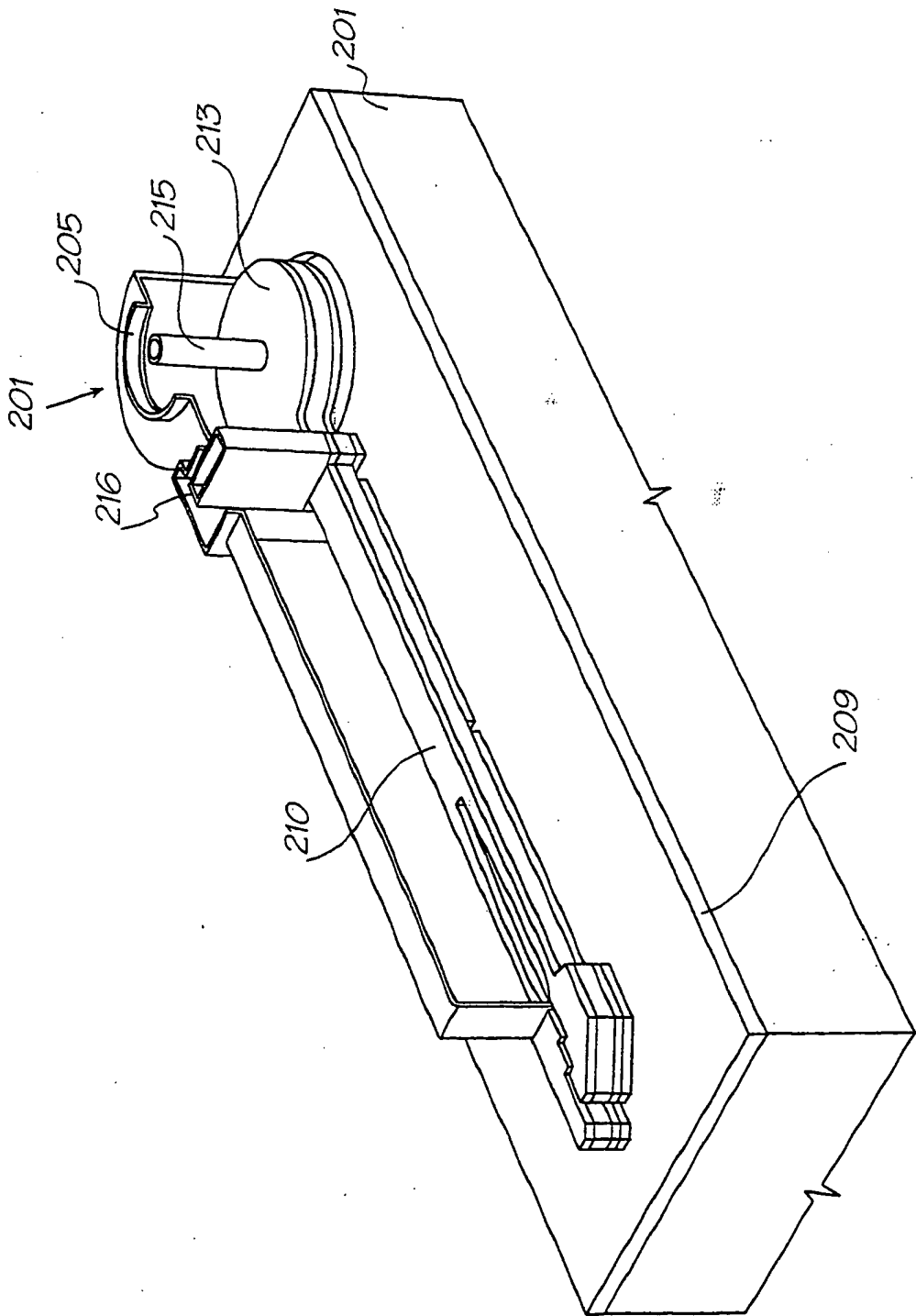


FIG. 107

80/81

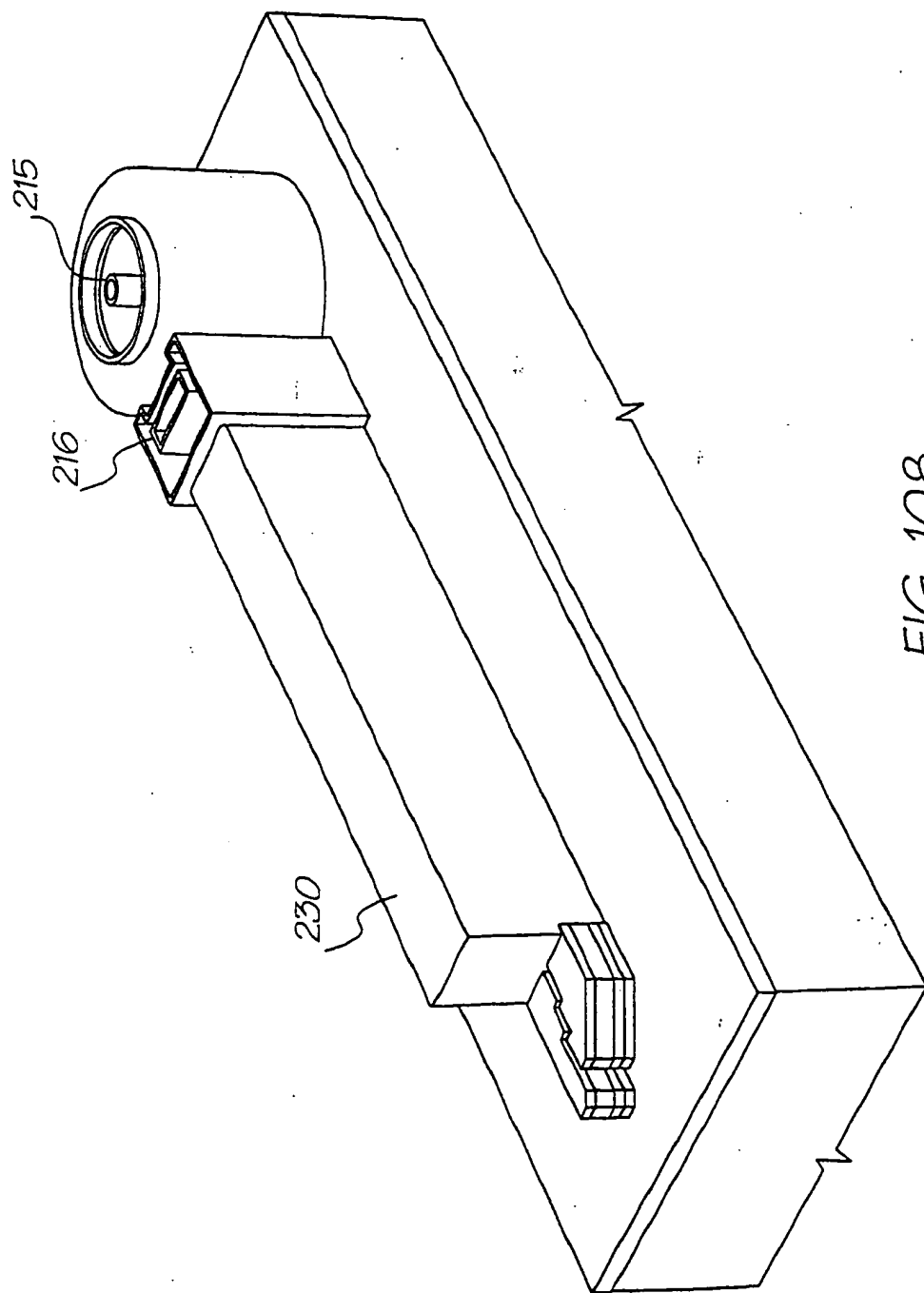


FIG. 108

FIG. 108

81/81

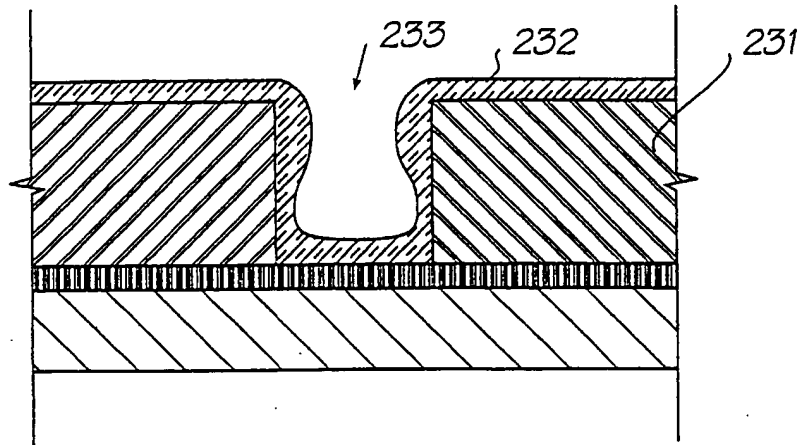


FIG. 109

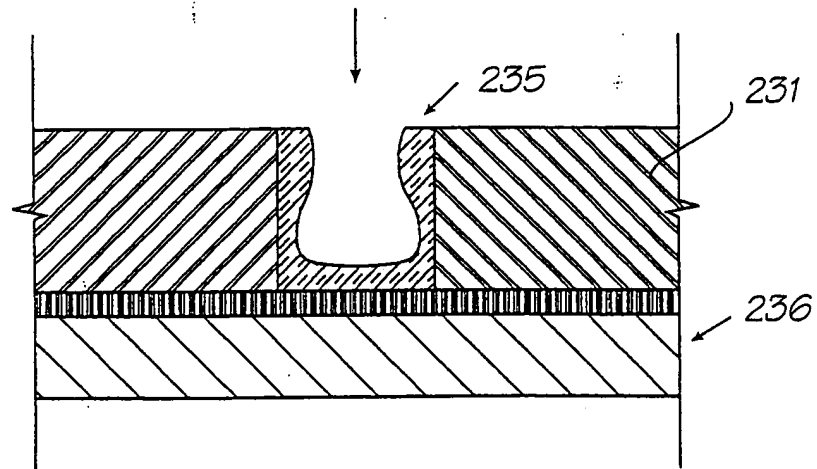


FIG. 110

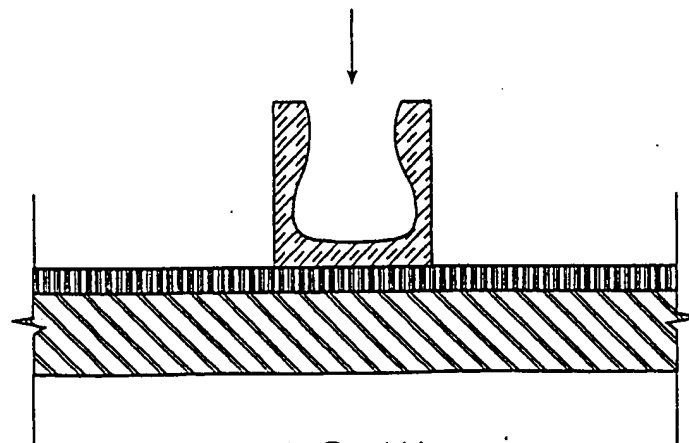


FIG. 111

0963571.041601